FIRE ENGINEERING

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APR 23 1957
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The Journal of the Fire Protection Profession Since 1877

APRIL, 1957

Memphis Fire Department's rebuilt "Big Bertha" tower belting out Niagaras to drown conflagrations! See Page 337

IN THIS ISSUE...

Nursing Home Holocausts Emphasize Need of Protective Measures

Problems of Volunteer Field Inspections—And Some Solutions

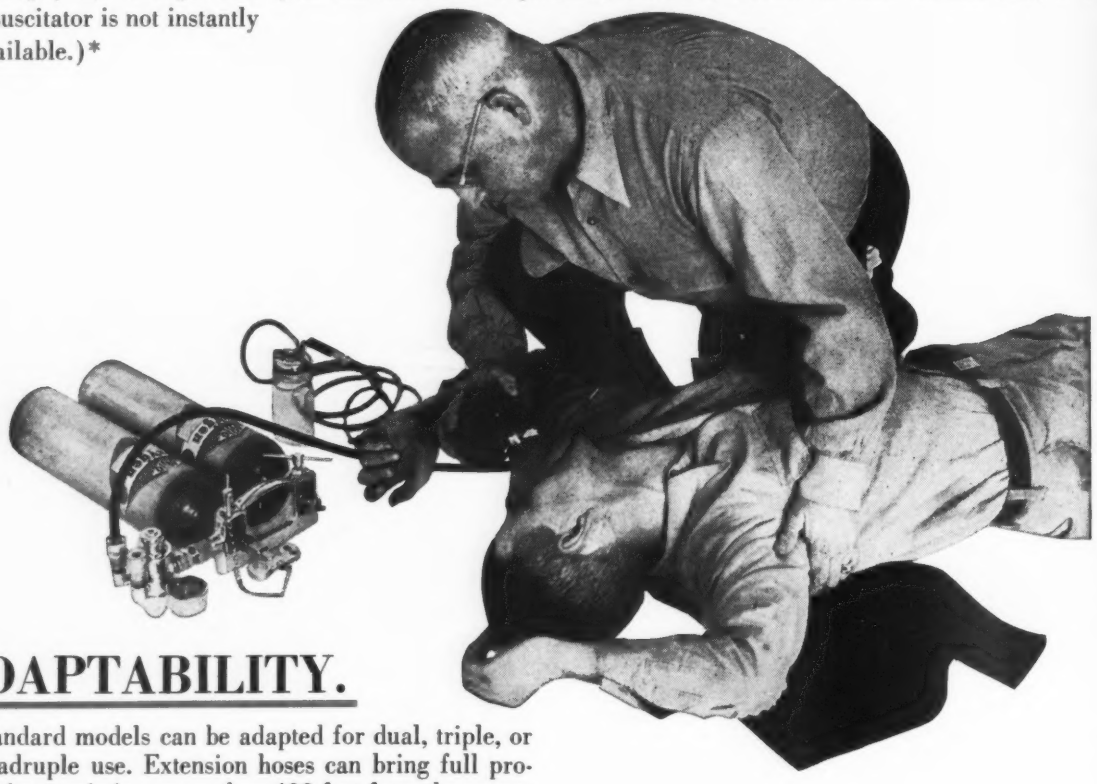
Putting More Power into Plant Fire Protection

These Advantages Add Up!

SIMPLICITY. In breathing emergencies speed saves lives, and simplicity means speed. Emersons have it.

SAFETY. No instance has ever been recorded of injury from the gentle pressures used. Since approval by the American Medical Association in 1942 thousands of cases have been treated, all safely, including adults, children, and even newborn babies. An important safety factor is the suction phase, which gives vital aid to the circulation by helping the heart to fill normally.*

EFFECTIVENESS. Extensive medical research has found immediate positive-and-negative resuscitation to be the most effective life-saving measure in asphyxial emergencies. (Manual artificial respiration, however, should be used as first aid, if a resuscitator is not instantly available.)*



ADAPTABILITY.

Standard models can be adapted for dual, triple, or quadruple use. Extension hoses can bring full protection to victims more than 400 feet from the parent machine. Manifolds are available for Civil Defense protection.

Write for circular on the newest models.

****Write for free bulletins "Medical Reference on Resuscitation" and "A New Manual Method of Artificial Respiration."***

EMERSON RESUSCITATORS

Can Help You Save Lives

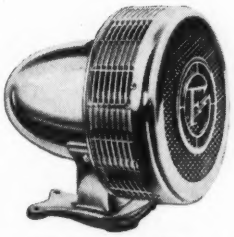
J. H. EMERSON COMPANY

32 COTTAGE PARK AVENUE, CAMBRIDGE 40 MASSACHUSETTS

You can't place a dollars and cents value on a human life. Certainly it's worth more than the price of an adequate warning signal. The first act of *any* department at the scene of a fire is to *save lives* rather than property. Large sums are spent for special ladders, nets, chutes, resuscitators and other *life saving* equipment. The use of this equipment for fire fighting is actually secondary. The difference between the price of a FEDERAL Beacon Ray and inferior warning lights can be the price you put on a human life. *Don't let a few dollars deprive it of any portion of the good it can do.*

$75.00 buys the best vehicle warning light in existence —the FEDERAL Beacon Ray! If your department is one of the few not so equipped—don't delay—order *now!*

Write for catalog 300 on FEDERAL sirens and lights.



Model Q Siren

Class Q and C coaster sirens surpass all others and lead a complete line of sirens and siren-light combinations.

Get there quicker and safer . . . the life you save may be your own!

FEDERAL SIGN and SIGNAL Corporation

8702 S. State St., Chicago 19, Ill.

FIRE ENGINEERING

VOL. 110 April, 1957 NO. 4

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With F. E.'s Correspondents

Jerry Daly, life-long buff and former reporter for New York newspapers, covered Fire Headquarters and City Hall and has been a contributor to FIRE ENGINEERING for many of his 69 years, all of which time has been devoted to the New York Fire Department. For years he has written the column "Fire Crackers" in "The Chief," a civil service weekly on which he started his newspaper career in 1910.

During World War I, Jerry was chief of the Fire Auxiliary Corps in the Borough of The Bronx. Last September, Fire Commissioner Edward F. Cavanagh, Jr. awarded him a Certificate of Merit: "For an abiding loyalty and understanding of the interests, traditions and personalities of the New York Fire Department. . . ."

During World War II, Jerry did his stint as auxiliary fire alarm dispatcher in the Manhattan Central Office where he set an attendance record.

He has had a "tapper" at his bedside for 40 years and, in recent years, a short wave radio on his desk. He is a member of the IAFC and the NFPA and also the Bell Club and the Cycle Club. He earns his livelihood as Secretary of the New York City Transit Authority—a 32-year "tour."

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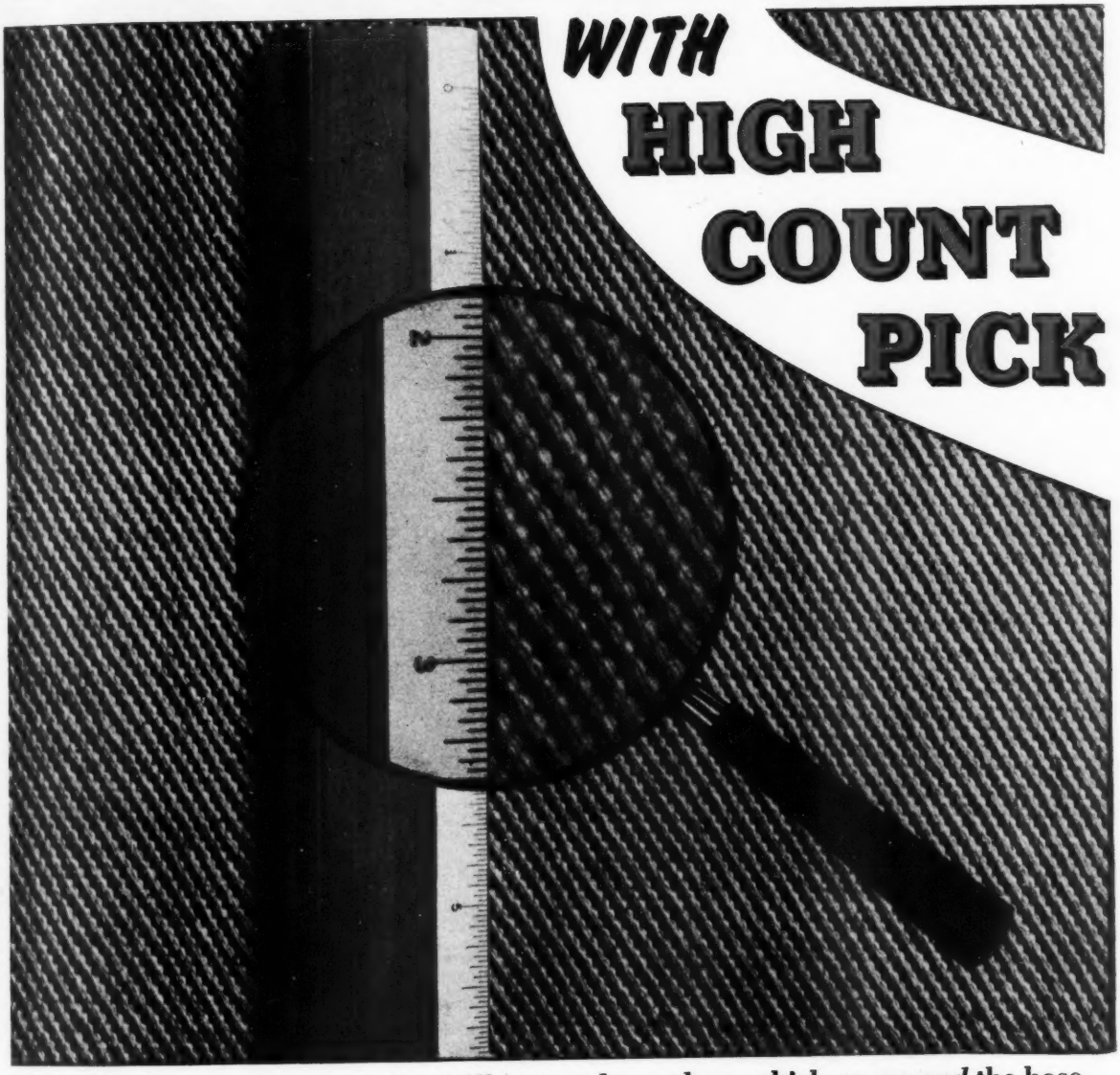
FABRILON

WITH HIGH COUNT PICK



"*Pick*" is the number per inch of filler strands, or those which go *around* the hose. FABRILON has the remarkably high pick count of 12 to 14 per inch. In FABRILON, high pick count means *closely woven twill jackets* which *resist abrasion and snagging* and slide over obstacles with *minimum surface friction.* It also means *smooth texture, ease of handling, high burst* and resistance to *pressure shock* or *water hammer.*

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Chief **POWHATAN'S** *NEW*

DURA-FOG NOZZLE*

- ***A Strong Husky Nozzle***
- ***Maintenance Free***
- ***Greater Reach***
- ***Finer Dispersion***
- ***Denser Curtain***
- ***Each Nozzle Sold Has A 100% Performance Test***

* *So Called Because of its Durability*

Rubber bumper for protection and non-slip grip. "Clicks" into straight stream or desired fog pattern. Stream can be selected by sight or touch. Floating gland type shut off. Shock absorbant shut off mechanism. Sure grip base and sturdy handle.

Over a million shut-offs WITH NO LEAK

Dura-Fog Nozzles have been thoroughly bench tested, to assure dependability. We strived for 250,000 shut-offs, actually tests have gone over a million with no leak!

PERFORMANCE DATA 1-1/2" SIZE

	STRAIGHT STREAM		30° FOG PATTERN		60° FOG PATTERN		90° FOG PATTERN	
NOZZLE PRESSURE	GPM	REACH	GPM	REACH	GPM	REACH	GPM	REACH
100 PSI	57	85′	60	40′	65	30′	72	20′
125 PSI	62	105′	65	43′	68	35′	75	22′

We have been manufacturing fire protection items for the past 64 years. If you do not have one, write for our catalog "A" which shows Powhatan's complete line.

POWHATAN

BRASS AND IRON WORKS

RANSON, WEST VIRGINIA

B.F.Goodrich

500 extra feet of B.F.Goodrich hose racked on this truck

WHEN stiff, bulky fire hose was used by the Northfield (Ill.) Volunteer Fire Dept., the overflow was piled on top of the truck, making it hard to unload.

Then they switched to B.F.Goodrich Fire King because it is light weight, flexible, and takes up less space. Now they're racking 500 extra feet of hose, which saves vital minutes when laying lines at a fire.

Weight used to mean strength. But since B.F.Goodrich developed Fire King, there's no advantage in using heavy, cumbersome hose. Use of a chemically-produced fiber as "filler cords" makes this hose 22% lighter, much more flexible than ordinary hose. As a result, it gets into action faster, is easier to lift and carry, and cuts loading time because it coils easily, racks naturally on the truck bed.

And now, for only pennies more per foot, you can add a new factor in safety and long life. The new, exclusive B.F.Goodrich Superseal treatment makes fire hose 10 times more resistant to mildew and rotting. Unlike ordinary treatments, which just coat the hose surface, Superseal penetrates every cord in the inner and outer jacket, prepares the hose for all sorts of weather.

When you want hose that will last longer than any fire hose ever sold, get B.F.Goodrich hose with Superseal protection. Your B.F.Goodrich fire hose distributor can tell you more about it, or write *B.F.Goodrich Industrial Products Co., Dept. M-932, Akron 18, Ohio.*

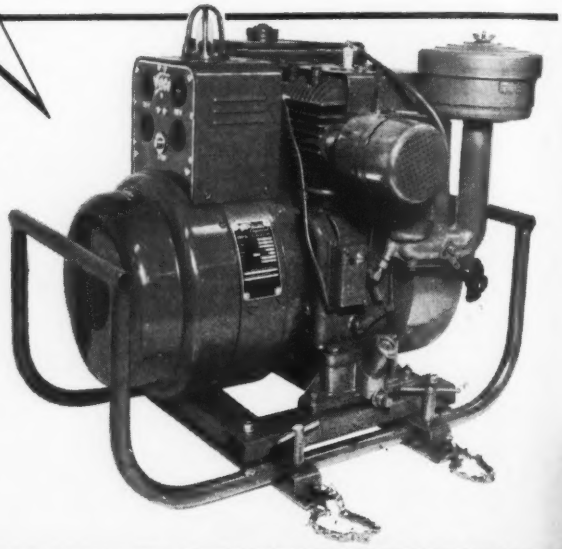
B.F.Goodrich

INDUSTRIAL PRODUCTS

All the features fire-fighters demand

WINCO® FIRE FIGHTER DIRECT DRIVE

ENGINE GENERATOR



Winco Model 205B14S2D-1M4
2500 watt AC Generating Plant. 60 cycle—115 or 115/230 volts.
#23410R Carrying Cradle Kit and #24277R Quick-Release Mounting Kit optional accessories.

4 POWER OUTLETS for lights, fans, power tools

QUICK RELEASE FROM TRUCK

FAST STARTING — dependable 4-cycle Briggs & Stratton Engine

You wouldn't use an ax to dig a hole if a spade were handy. So why use a generator designed for general power requirements when *Winco Fire-Fighter is designed just for you?*

Steady Power

King size generator provides especially close voltage regulation and steady power to keep tools and equipment operating at peak efficiency — provide steady, strong light.

Extra Lightweight

Easily portable — The Winco Fire Fighter can be moved to wherever power is needed. Optional carrying cradle or handle gives you the portability you often need.

4 Power Outlets

Flexibility — you can use up to 4 tools or use tool, equipment and light combinations.

Quick-Release From Fire Truck

Hand-turning quick release mechanism provides rigid plant mounting on truck, and quick release when plant must be moved.

Idling Control

The Winco CONSERV-er is available (optional) on the Winco Fire Fighter. Reduces engine to idling speed when power is not required, revs up to operating speed when turned on. Cuts down noise, saves fuel and precious time.

Get the specifications and prices on the Winco Fire Fighter Engine Generator right now. Write for complete details. Dept FE47.

WINCHARGER CORPORATION
SIOUX CITY, IOWA
Subsidiary of Zenith Radio Corporation

Automatically "breathes" for the victim . . . assures greatest chance of recovery . . .

M-S-A® PNEOLATOR

Successful "saves" with the M-S-A Pneolator are in the rescue records of fire departments all over the country. This instrument has been brought into play in cases of drowning, electric shock, poisonous or suffocating gases and heart attacks. Victims, from 8 months to 80 years, have recovered . . . thanks to the alert action of the firemen . . . the effectiveness of the Pneolator.

This unit intermittently inflates the lungs to a predetermined point, then cuts off to permit exhalation by the natural recoil of the chest and diaphragm. The action is automatic, continuous. When the victim starts breathing, the Pneolator automatically follows the natural breathing pattern. There is no suction cycle.

Pressure is regulated by simple settings that compensate for varying lung capacities. Two facepieces—for adults and children—are standard equipment. The unit is portable, and comes equipped with a half-hour oxygen supply. Write for details.

Note: The first few minutes after breathing has ceased are the most critical. Manual artificial respiration should be started immediately, and continued until Pneolator is in use.

MSA
SAFETY EQUIPMENT HEADQUARTERS

Call the M-S-A man on your every safety problem . . . his job is to help you

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• TESTED-ANALYZED •

ATL

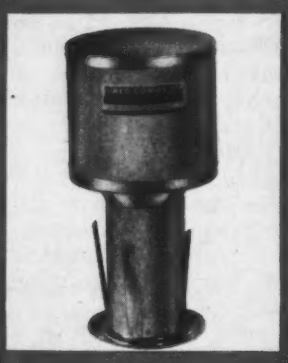
• AccuraTest Laboratory, Baltimore Md. •

EXTENSIVE LABORATORY TESTS OVER A PERIOD OF FOUR YEARS

Since 1953, over $50,000 has been spent in the development of Red Comet CM-7. Since its completion as a commercial product, extensive laboratory tests have been made by outstanding chemical engineers.

As a result of their findings, the AccuraTest Laboratories has authorized Red Comet, Inc., to affix the AccuraTest Seal to Red Comet CM-7 Automatic Vaporizing Chemical Fire Extinguishers.

WORLD'S LARGEST MANUFACTURERS OF AUTOMATIC VAPORIZING CHEMICAL FIRE EXTINGUISHERS



CM-7 is an Exclusive of

T Carries THIS SEAL!

Here are certified laboratory reports of tests . . . made under actual fire conditions in a specially constructed test chamber 16' long, 11' 10" wide, 8' 1" high . . . with a total air space in excess of 1500 cubic feet.

Proved in Laboratory

AUTOMATIC RED COMET CM-7 EXTINGUISHES CLASS A FIRES

THE TEST: Eleven pounds of shredded paper and dried wood shavings were mixed together and spread to completely cover the floor of the test chamber to a depth of approximately 3 inches.

THE RESULT: Four Red Comet CM-7 Safety Spray Units (2 lbs. 2 oz. each) were suspended from hooks on ceiling. From time of ignition until all units were activated, there was a total time lapse of 27 seconds. From activation to complete extinguishment . . . 27 seconds. In an identical test made with three Red Comet CM-7 Super Spray concealed units (3 lbs. 6 oz. each) . . . the total lapse from activation to complete extinguishment was 31 seconds.

AUTOMATIC RED COMET CM-7 EXTINGUISHES CLASS B FIRES

THE TEST: Into the test chamber was placed a steel pan 7' long, 3' wide, and 4" deep. One inch of water was added and then 3 gallons of high octane gasoline was poured into the pan. Then the gasoline was ignited.

THE RESULT: Four Red Comet Safety Spray Units (2 lbs. 2 oz. each) were suspended from hooks on ceiling. From the time the automatic Red Comet units were activated until the gasoline conflagration was completely extinguished . . . there was a total lapse of only 19 seconds.

In another identical test with three Red Comet CM-7 Super Spray concealed units (3 lbs. 6 oz. each) . . . from the time of activation until the conflagration was completely extinguished . . . there was a total lapse of only 7 seconds. In both Class B fire tests the activation was 15 seconds and 12 seconds respectively.

CM-7 COMBATS TOXIC GASES

Red Comet CM-7 Vaporizing Liquid was repeatedly tested under laboratory conditions favorable to the formation of phosgene gas, finding that toxic quantities of PHOSGENE GAS CAN NOT RESULT from the application of CM-7 vapor or liquid.

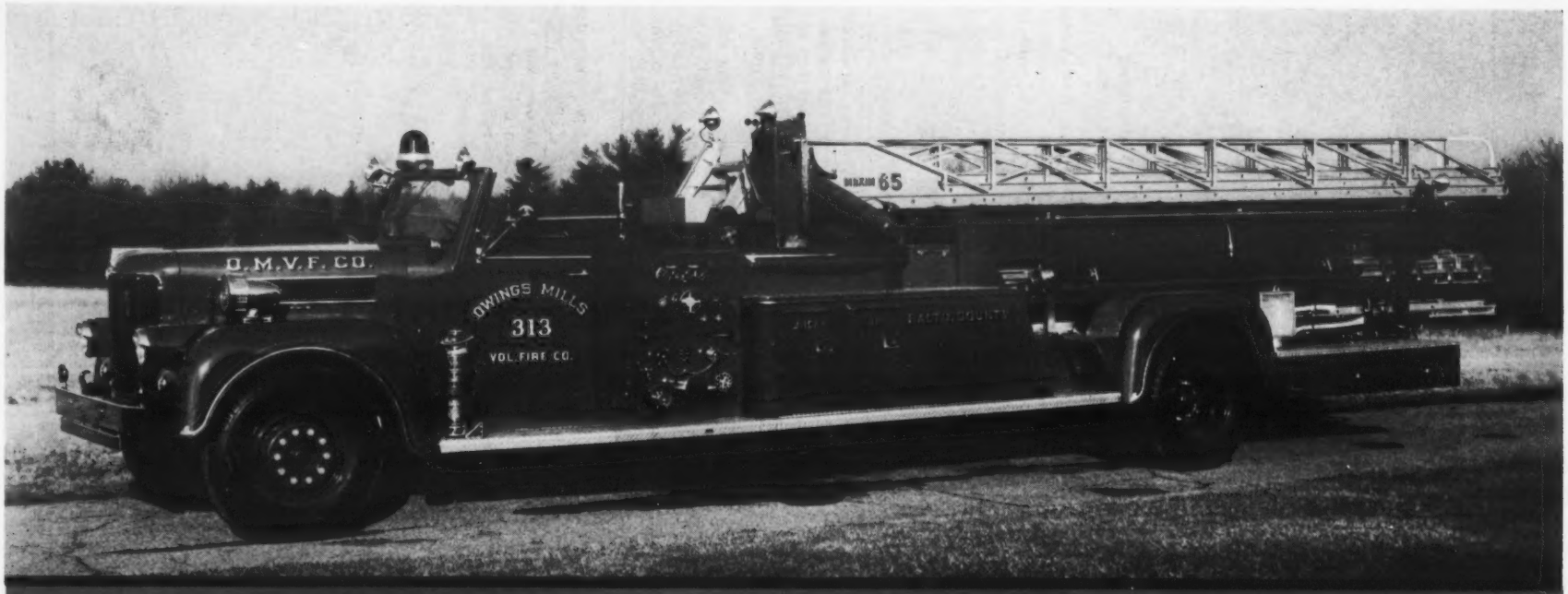
These laboratory tests employed a modern scientific detection method which is so exact it will indicate the presence of only 2 parts of phosgene in one million parts of air. The results of these tests were negative, as NO PHOSGENE WAS DETECTED.

Laboratory tests with CM-7 showed it COMPLETELY INHIBITS THE FORMATION OF CARBON MONOXIDE when adequately applied to any fire. The by-products of CM-7 in combustion are non-toxic and in themselves constitute effective fire extinguishing agents.

Proved in Actual Use

Even more important than laboratory tests are thousands of grateful users who credit Red Comet Fire Control Equipment with saving their lives and property. Our files are filled with letters of praise from people in rural . . . and urban communities . . . as well as fire department personnel.

f RED COMET, Inc. Littleton, Colorado



See this **VERSATILE**

MAXIM "QUINT"

at Owings Mills, Baltimore County, Maryland

Another excellent example of MAXIM engineering skill applied to the needs of rapidly expanding communities. We have years of "know-how" in designing fire apparatus, tailor-made to fit exact requirements. A consultation usually saves time as well as money. We'll be glad to give you the benefit of our experiance, anytime.

MAXIM MOTOR COMPANY MIDDLEBORO MASSACHUSETTS

"THERE'S NO SUBSTITUTE FOR THE BEST MEN

...OR THE FINEST RADIO EQUIPMENT

Maximum fire protection demands maximum effectiveness. Your firemen—dependable, able, and ready at a moment's notice—must have equipment of the same qualifications. Every one of the parts that go into your 2-way radio must be the finest available . . . must be guaranteed for long life . . . must keep the radio working in all emergencies. No wonder 3 out of 4 of the nation's radio-equipped fire departments depend upon Motorola 2-way radio and HANDIE-TALKIE® radiophone.

In New York, Miami, Los Angeles, Chicago . . . and practically every other leading city and countless large and small communities . . . rugged Motorola radio is proving that it is engineered to give the most dependable 2-way communications.

In your city or town, Motorola is ready to help you multiply your department's efficiency and protection. Learn how these benefits can be applied to your own operation.

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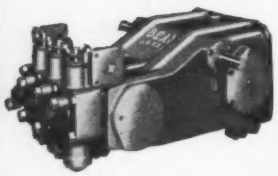
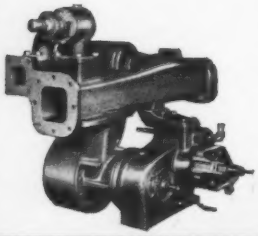
greater versatility





1 *HPV — BOTH HIGH-PRESSURE FOG AND VOLUME PUMPS — Operated separately or simultaneously, these two John Bean pumps are the heart of the HPV's dual fire-fighting systems. One is the original John Bean high-pressure pump, famous the world over for its rugged construction and dependable performance. For true high-pressure fog fire-fighting, the pump operates at 850 psi delivering 60 GPM through two hose lines. The other is John Bean's Class A centrifugal volume pump (N.B.F.U. tested), available in capacities of 500, 600, or 750 GPM.

2 IN-MOTION PUMPING — John Bean's in-motion pumping makes the HPV doubly effective in fighting brush, grass, and forest fires. High-pressure pump has its own power take-off coupled to the engine so that fog lines can be operated while truck is in motion. Control for engaging pump is located conveniently inside cab.

instant action always

3 DUAL BATTERY SYSTEM — Instant starting is always assured by John Bean's dual battery system, which is standard equipment on all HPV Firefighters.

4 PUMP PRIMING — No time is lost in getting the John Bean volume pump into action. Gear shifting from "road" to "primer" has been eliminated. Primer control automatically opens and closes pump valve. The priming pump is of the positive displacement type and is used for *priming* only.

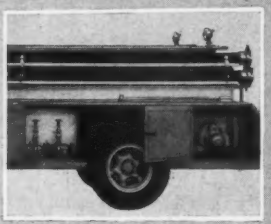
21 REASONS WHY

operating convenience

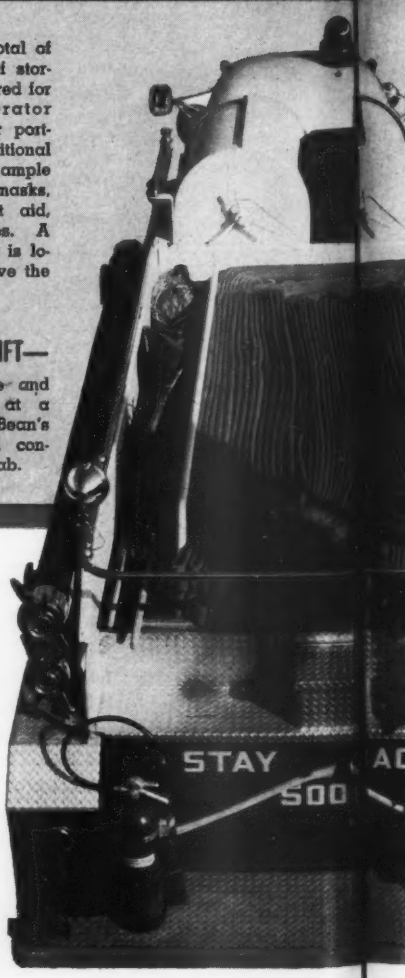
9 CENTRALIZED CONTROL PANEL — All gauges, valves, and controls are centralized on a single control panel for convenient operation. Panel is illuminated for quick, easy reading at night.

10 POWER REWIND HOSE REELS — For faster, easier hose pick-ups, both 200-foot high-pressure hose reels are equipped with powered rewind mechanisms. Hoses run smoothly over roller guides and are fed evenly onto reels.

11 AMPLE STORAGE SPACE — Four large-size, fully lighted compartments are built in to provide a total of more than 45 cu. ft. of storage space. One is tailored for slide-mounted generator equipment; another for portable water pump. Additional compartments offer ample storage for oxygen masks, nozzles, adapters, first aid, and other accessories. A small tool compartment is located conveniently above the rear platform.



12 INSIDE PUMP SHIFT— You save critical time and steps when arriving at a fire because John Bean's pump shift is located conveniently inside the cab.



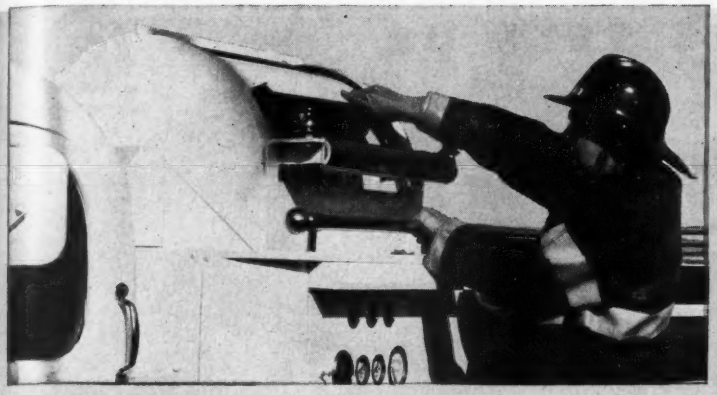
personnel safety

18 FULL-LENGTH GRAB RAILS— Chrome rails at convenient height extend full length of hose body and across rear, permitting firemen to don equipment safely while riding.

19 NON-SKID RUNNING BOARDS — Full-length side running boards are manufactured from approved non-skid treadplate, are securely mounted to the chassis frame.

20 EXTRA-WIDE REAR PLATFORM — Safety and comfort for riding firemen is assured by John Bean's extra-wide rear platform, constructed of approved non-skid treadplate.

21 FACTORY TRAINING by experienced fire fighters at John Bean is a part of the regular service that goes with every John Bean truck. Complete course teaches your personnel how equipment is best used and properly maintained.



5 WINTERIZED REEL COMPARTMENTS — To assure dependability in freezing weather, engine heat is channelled into enclosed reel compartments where it is retained by sliding metal covers. Engine heat is also used to warm pumps, valves, gauges, and controls.

rugged construction

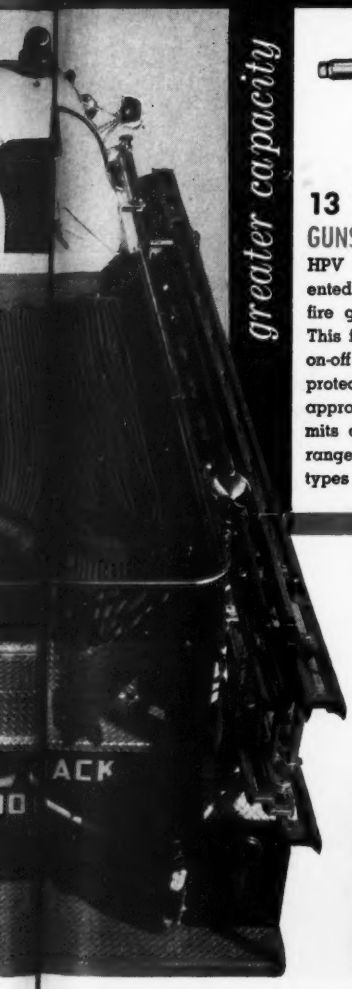
6 BALL-TYPE DISCHARGE GATES — Rugged, quick-acting ball-type gates will not leak under pressure or suction, turn easily at all operating pressures.

7 HEAVY, RUST-PROOFED TANK — 500-gallon, 10-gauge steel water tank is fully treated against rust to assure long life. Large, removable tank covers permit easy cleaning and inspection.

8 HIGH-STRENGTH PANELLING — All body panelling and compartments are made from special 12-gauge, stretcher level, body steel, completely reinforced with U-formed top for added strength and rigidity.

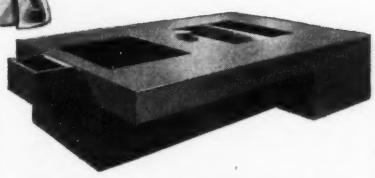
John BEAN HPV* FIREFIGHTERS

meet your fire-fighting needs like no other equipment can!



greater capacity

13 THREE HIGH-PRESSURE GUNS — Furnished with each HPV Firefighter are three patented John Bean high-pressure fire guns (third gun is spare). This famous gun features instant on-off trigger action with face-protecting spray for close fire approach. Rotating barrel permits quick selection of complete range of fog patterns for all types of fire.

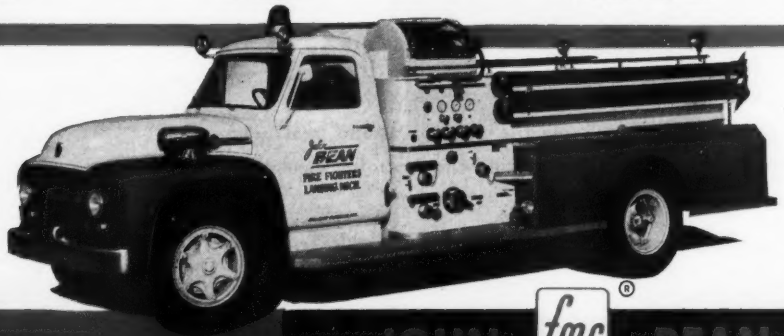


14 500-GALLON TANK — Big 500-gallon tank supplies water for John Bean high-pressure fog lines. Fire-extinguishing value of water discharged as high-pressure fog is increased by a ten-to-one ratio — makes the 500 gallons go ten times further. Six-compartment baffling prevents undesirable water surge.

15 SPACIOUS HOSE BED — Smooth, level hose bed is properly ventilated . . . provides ample space for 1200 ft. of 2½-inch and 400 ft. of 1½-inch double-jacketed fire hose.

16 400 FT. OF HIGH-PRESSURE HOSE — Standard equipment with each HPV Firefighter includes two 200-foot reels of special high-pressure (3500 psi discharge) hose.

17 40 FT. OF SUCTION HOSE — Other standard equipment includes two 10-foot lengths of 2½-inch and two 10-foot lengths of 4½-inch hard suction hose, complete with hydrant adapters and suction screens.



For complete details on John Bean Firefighters, write today for catalog.

JOHN BEAN — fmc FOOD MACHINERY AND CHEMICAL CORP.

Dept. 126, Lansing 4, Michigan
P.O. Box 145, San Jose 3, California

A Division of Food Machinery and Chemical Corp

FIREFIGHTERS TELL US

Sustaining Member

"We Specify HANNAY® Fire Hose Reels

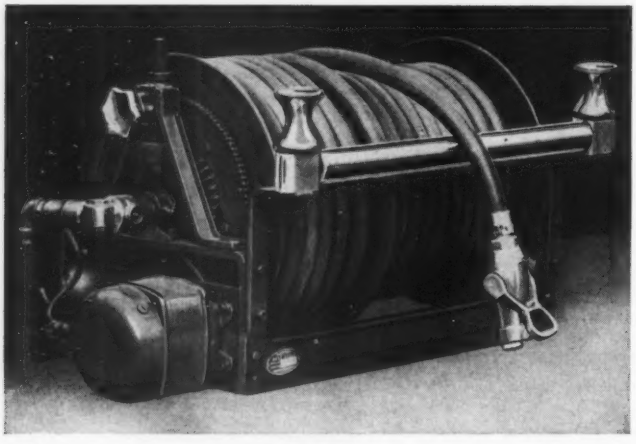
because

. . . their smooth operation assures instant operation at the scene of a fire . . ."

". . . on front line fire equipment only the best time tested and proven equipment should be used . . ."

". . . they are built to take a beating . . ."

". . . I want dependable and efficient service UNDER ALL CONDITIONS . . ."



Hannay explosion-proof electric motor rewind reel with auxiliary vertical crank rewind and chrome roller assembly.

There are many different reasons why *HANNAY* Fire Hose Reels are accepted as the finest by firefighters everywhere. Ruggedness, dependability, ease of operation, leak-proof swing joints, outstanding features are among the most mentioned. However, it all goes back to the fact that they are designed and built by active firemen who put into these Fire Hose Reels first-hand knowledge gained through firefighting service. Be sure you get everything you want in your Fire Hose Reels.

For every type of firefighting equipment Specify **HANNAY®**

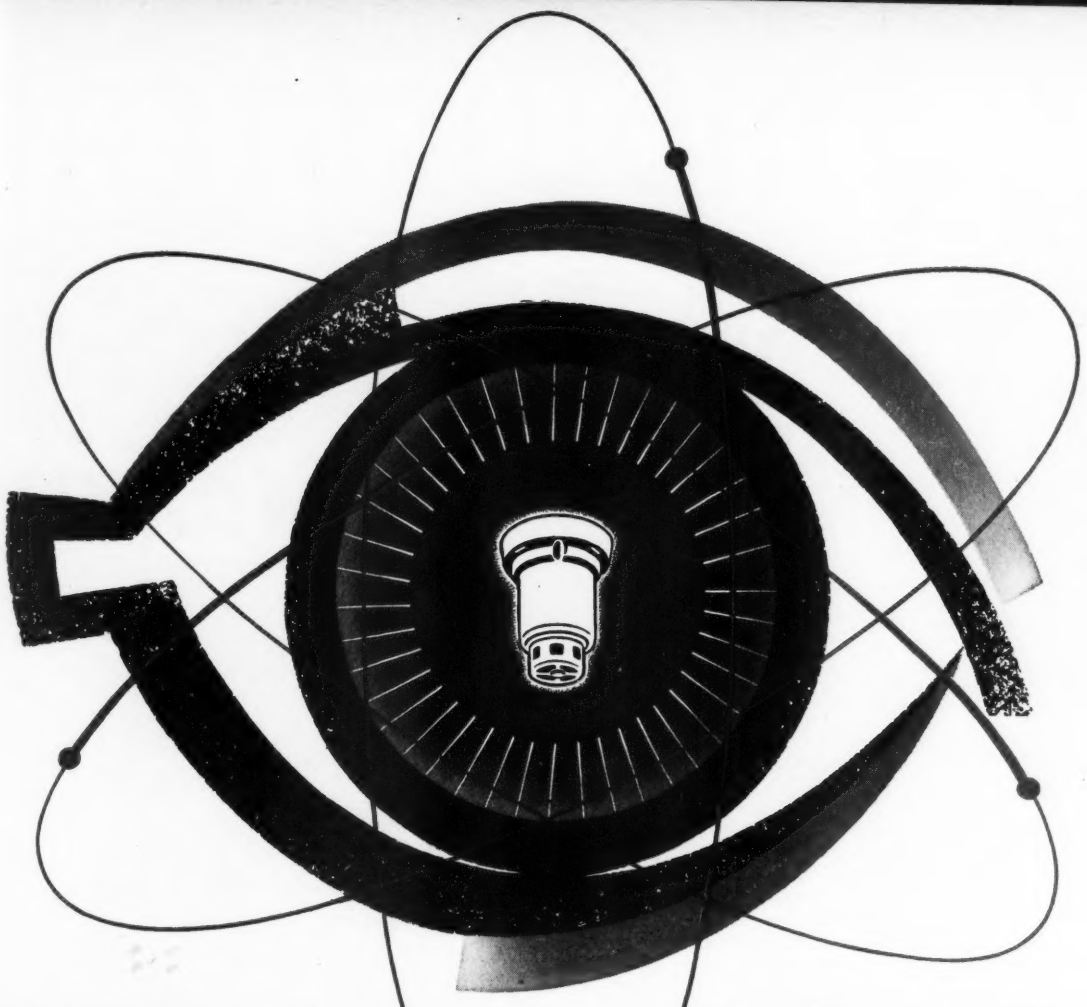
...Greatest Name in Hose Reels

© 1957 C.B.H.&S., INC.

HANNAY®

CLIFFORD B. HANNAY & SON, INC.

Westerlo, New York



Nuclear energy takes over the fire watch...

And thus a revolutionary fire detection system—a product of modern science in the Atom Age—has changed the odds to favor the men who fight fires! Nuclear-powered PYR-A-LARM gives the Fire Department time to take effective action because it reacts to the products of combustion! In those vital minutes before dangerous temperatures build up—before smoke or flame develop—long before a thermal detection device would be actuated—PYR-A-LARM flashes a warning that can spell the difference between a fire of major proportions, and one brought quickly under control.

Let us show you how easily and economically nuclear energy can take over the fire watch for you, as it has for more than one hundred of the largest firms in the country. For a demonstration in your office, or for full information on the PYR-A-LARM System, simply mail the coupon below.

Among organizations that have installed the PYR-A-LARM System are:

Bethlehem Steel Co.
Chicago, Milwaukee, St. Paul & Pacific Railroad Co.
Consolidated Edison
Delaware Power & Light Co.
Illinois Bell Telephone Co.
United Airlines
U.S. Bureau of Standards
U.S. Navy (Guided Missile Ships)

PYR-A-LARM

NUCLEAR FIRE PRE-DETECTION SYSTEM

Pyrotronics
A DIVISION OF BAKER INDUSTRIES, INC.

Post Office Box 390, Newark 1, N. J.

NUCLEAR FIRE DETECTION AND ALARM SYSTEMS

Approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories.

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☐ Kindly send literature describing PYR-A-LARM.
☐ Please contact me to arrange a demonstration in my office.

NAME.....

NAME OF PLANT.....

ADDRESS.....

CITY..... STATE.....

MIDWESTERN

Safety Clothing

for Men of ACTION!

The Original MIDWESTERN
STRIPED SAFETY COAT
Reduces Accidents—Saves Lives

When working under hazardous conditions in smoke, fog, dust and darkness, you deserve the safety protection found *only* in the Midwestern Striped Safety Coat. The highly visible yellow stripes are *rubberized as part of the material* . . . not glued, painted or sewed on. Tests show that Midwestern yellow stripes retain their natural color and have the same durability as the black fabric.

There are many imitations but no substitute for the superior quality, design, fabric texture and outstanding safety features of MIDWESTERN SAFETY CLOTHING FOR FIREMEN!

MIDWESTERN
COMBINATION SAFETY SUIT

The Midwestern Rubberized Coat and Bunker Pants combination make it easy for firemen to keep both warm and dry even in the most severe weather. Close fitting collar and elastic inner sleeve keep out sparks and water. Pants have double-stitched seams, reinforcing rivets at points of strain. Both garments available with detachable wool linings.

For complete information on our full line of safety clothing for firemen, see your Midwestern dealer. A letter to the factory will also bring you literature and materials for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

Chief T.P. Treadwell of Fort Collins, Colorado

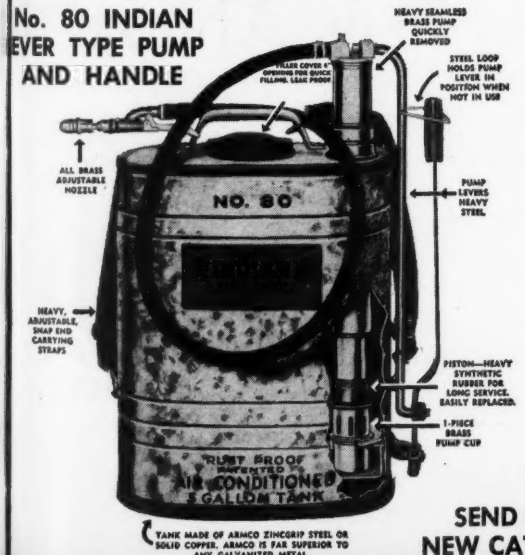
(Winner of 1st place in fire prevention in cities of less than 20,000)

SAYS:

"INDIAN FIRE PUMPS are an indispensable fire fighting tool!"

We are proud of the fact that INDIAN FIRE PUMPS have played a part in enabling the city of Fort Collins, Colorado to win many awards for fire prevention. Members of Engine Co. No. 1 are shown here with their INDIANS.

No. 80 INDIAN FIRE EXTINGUISHER TYPE PUMP AND HANDLE


HEAVY SEAMLESS BRASS PUMP QUICKLY REMOVED
STEEL LOOP HOLDS PUMP LEVER IN POSITION WHEN NOT IN USE
ALL BRASS ADJUSTABLE NOZZLE
PUMP LEVERS HEAVY STEEL
NO. 80
HEAVY, ADJUSTABLE, SNAP END CARRYING STRAPS
PISTON—HEAVY SYNTHETIC RUBBER FOR LONG SERVICE. EASILY REPLACED.
1-PIECE BRASS PUMP CUP
RUST PROOF
AIR CONDITIONED
5 GALLON TANK
TANK MADE OF ARMCO ZINCGRIP STEEL OR SOLID COPPER. ARMCO IS FAR SUPERIOR TO ANY GALVANIZED METAL.

No. 90 INDIAN SLIDING PUMP TYPE

All Seams are Electric Welded—no leakage. Pump throws 30 ft. pressure stream or nozzle adjusts for spray. Strongly built — lasts for years. Many **INDIAN FIRE PUMPS** over 20 years old are still in service.

BOTH TYPES ARE APPROVED BY UNDERWRITERS LABORATORIES

SEND FOR NEW CATALOG

D. B. SMITH & CO.

"FOR 70 YEARS THE LEADER"

806 Main St., Utica 2, N. Y.

Hercules Equipment & Rubber Company, Inc. San Francisco 7, Calif.

Halprin Supply Co. Los Angeles 15, Calif.

Fred E. Bennett Co. Portland, Oregon

Fred E. Bennett Co. Klamath Falls, Oregon

Hill & Mine Supply, Inc. Seattle 4, Washington

L. M. Curtis & Sons Salt Lake City, Utah

Heck Bros. Limited Vancouver, B. C., Canada

C. E. Hickey & Sons, Ltd. Hamilton, Ont., Canada

Bison Hardware Co. Toronto, Ont., Canada

Minutes Ago This Jet Was Ablaze

This Jet Fighter skidded over half a mile and burst into flame at Worcester airport. In minutes Rockwood Double-Strength FOAM was blanketing the blaze. A dangerous fire was soon under control — because the airport and Worcester Fire Departments were prepared.

As you know, the danger of highly flammable liquid is not confined to aircraft. Every day tank trucks carrying volatile fuels move in and out of your city. Rockwood Double-Strength FOAM can help protect your city from this potential danger.

Rockwood Double-Strength FOAM applied with a Rockwood FW Eductor fights flammable liquid and other fires of the same type fast and sure. Three parts mixed with 97 parts water forms a solid FOAM blanket that quickly reseals itself. The Rockwood Eductor with the new FW metering check valve and the Type SG60 nozzle applying the FOAM make short work of fire.

Be prepared. Put this fire fighter to work. Specify Rockwood FW Eductor when you order a truck. Write Rockwood Sprinkler Company, 1551 Harlow Street, Worcester 5, Mass.

The Variable FW Metering Check Valve on the Rockwood Eductor is highly versatile (standard equipment). Both are incorporated in a single unit. Material is metered into the hose line in any proportion from 1% through 6%.

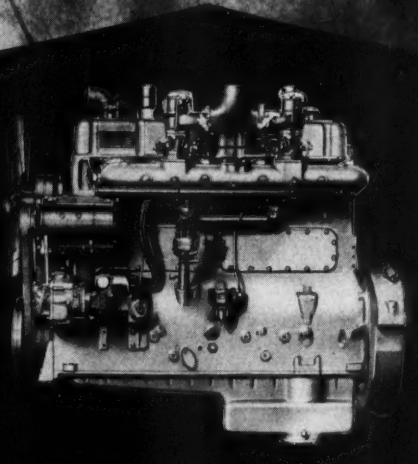
ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Distributors in all principal cities

finest fire engine
POWER

WAUKESHA



MODEL 145-GZB—260 hp range

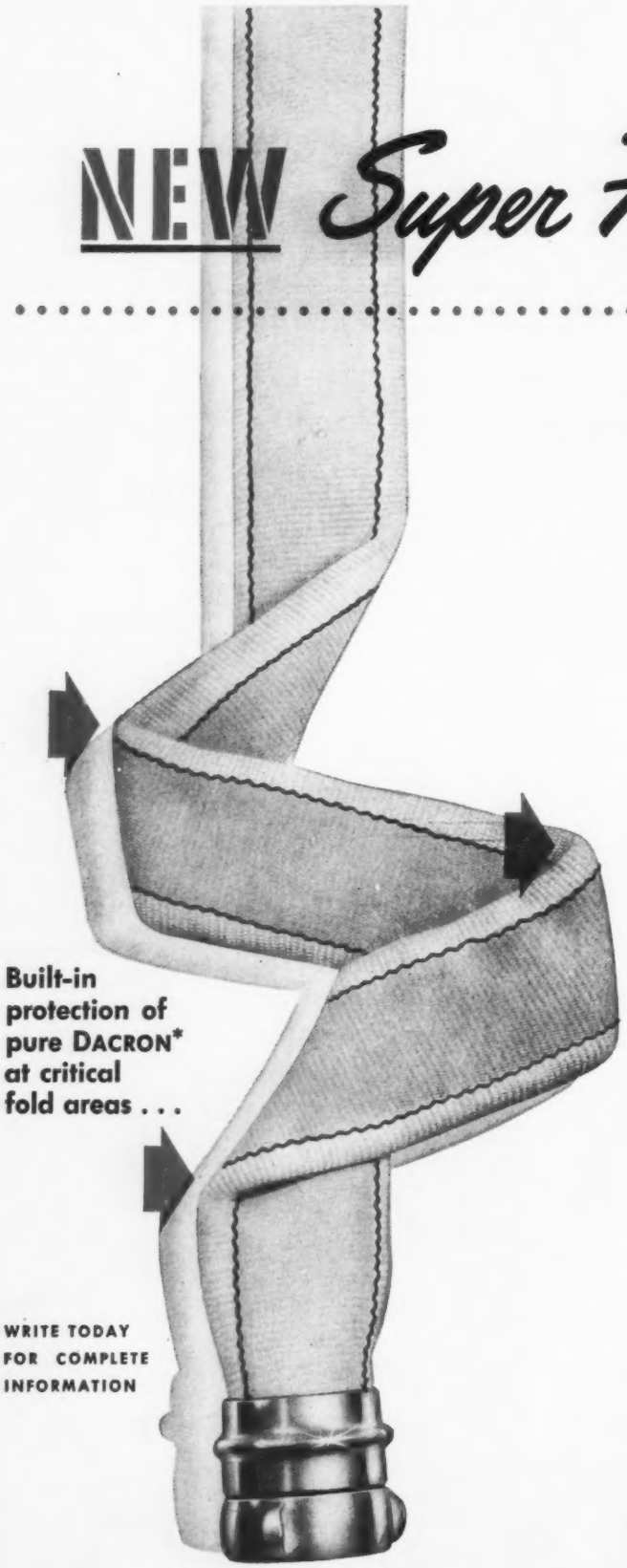
Write for descriptive bulletins

WAUKESHA MOTOR COMPANY, WAUKESHA, WIS.

New York • Tulsa • Los Angeles

340

NEW Super Fyr-Strype



Built-in protection of pure DACRON* at critical fold areas . . .

WRITE TODAY FOR COMPLETE INFORMATION

eliminates

90%

of hose wear!

Super Fyr-Strype, Fyr-Fyter's newest first line municipal fire hose, has built-in protection of pure *Dacron** strips over the total outer jacket fold areas! These areas are the highly vulnerable points of standard cotton jacket hose where 90% of wear occurs. Super Fyr-Strype's tough and rugged reinforcing strips are practically immune to wear . . . they provide a new high in resistance to the ravages of abrasion! Added advantages include *extra strengthening* at key points permitting high test pressure—an extra safety margin; *quicker drying* at folds and creases—a positive protection against mildew at these points because the *Dacron* fold strips are non-absorbent; and *increased flexibility* for faster unloading and easier racking.

In addition to fold strips, both outer and inner jackets are also reinforced with *Dacron* filler cord. Here again Super Fyr-Strype has built-in extra endurance and resiliency for top performance, plus high resistance to mildew, chemicals and water absorption. It is 15% lighter and 50% stronger than conventional hose. This double jacket, 600 lb. test hose is available in 50 ft. lengths, either 1½" or 2½" diameter.

***DuPont's trade-mark for its polyester fiber.**

Fyr-Fyter

DIVISION OF THE FYR-FYTER COMPANY
221 CRANE STREET, DAYTON 1, OHIO
Branches: *New York, Boston, Philadelphia, Chicago, Atlanta, Dallas, San Francisco, Los Angeles, Portland, Seattle*
REPRESENTATIVES IN PRINCIPAL CITIES

1957 WARD LaFRANCE PUMPERS

for Des Moines

Model 112OT Semi-cab with new Waterous Electro-Matic CM-1000 G.P.M. pump. The fourth Ward LaFrance delivered to Chief Wayne E. Ulm for the Des Moines, Iowa, Fire Department. Ward LaFrance Representative: O. L. Brown, 1434 Harding Road, Des Moines.

1957 WARD LA FRANCE PUMPERS—similar to those servicing Des Moines, Akron and other cities—are available for your community too. They offer specially designed cabs and chassis with unusual safety features — plus the dependable protection and excellent fire fighting service for which Ward LaFrance apparatus has been famed for over 39 years. Ask to have a Ward LaFrance representative tell you about these new models in detail.

for Akron

Model 112OT Seven-man Canopy Cab (rear entrance) with new Waterous Electro-Matic CM-1000 G.P.M. pump delivered to Chief Gerald Vernotzy for the Akron, Ohio, Fire Department. Ward La France Representative: Stanley R. Smith Co., 1200 West Ninth St., Cleveland.

Free Hose Discharge Tables

WARD LaFRANCE TRUCK CORPORATION

Dept. 10, Elmira, N.Y.

Please send handy, pocket-size Tables showing discharge from smooth nozzles and friction loss in fire hose.

NAME _____ TITLE _____

ADDRESS _____

CITY _____ STATE _____

Now! 3 Alco-Lite Ladders for short wheelbase Pumpers... Old or New

Shown above is an Alco-Lite Pumper Roof Ladder and 2 Section Extension Ladder nesting in brackets designed for wood ladders. The nested thickness of the two is 6⅞". This pair not only makes an ideal replacement on old Pumpers but is very desirable equipment on new Pumpers.

3 Section Pumper Extension Ladder

The newest addition to the Alco-Lite Pumper series is a 3 Section Pumper Extension Ladder which is made in 30' and 35' models. Only 7" thick, the 3 PEL will nest by itself in brackets found on most Pumpers. On new Pumpers, the 3 PEL can be specified to nest with an Alco-Lite Pumper Roof Ladder. The 3 Section Pumper Extension Ladder has a rope and cable arrangement which allows the ladder sections to extend simultaneously. It is also equipped with spring loaded locks which operate automatically at any desired point.

Always specify Alco-Lite Aluminum Ladders

Alco-Lite Pumper Ladders are stronger and easier to handle because they are made of high tensile strength, industrial, aluminum alloy. Their deeply grooved, 1¼", rungs are permanently attached to the extra heavy gauge, double channel, side rails with expansion bushing construction. Alco-Lite Pumper Roof Ladders feature, in addition, extremely strong, folding steel hooks.

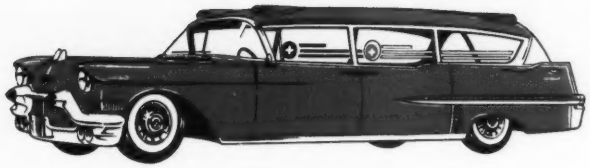
original manufacturer of aluminum ladders

ALCO-LITE

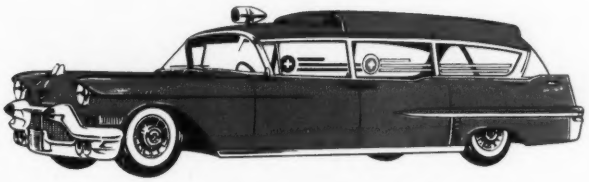
Aluminum Ladder Company

WORTHINGTON PENNSYLVANIA

LOW WIDE and **HANDSOME!**



Distinguished Superior design is rugged—all-steel welded construction from floor to one-piece, die-stamped roof.



Low loading height, headroom engineered to suit your requirements simplify rescue work, provide full space for equipment, supplies, work room. Equipment including oxygen available to meet all needs.

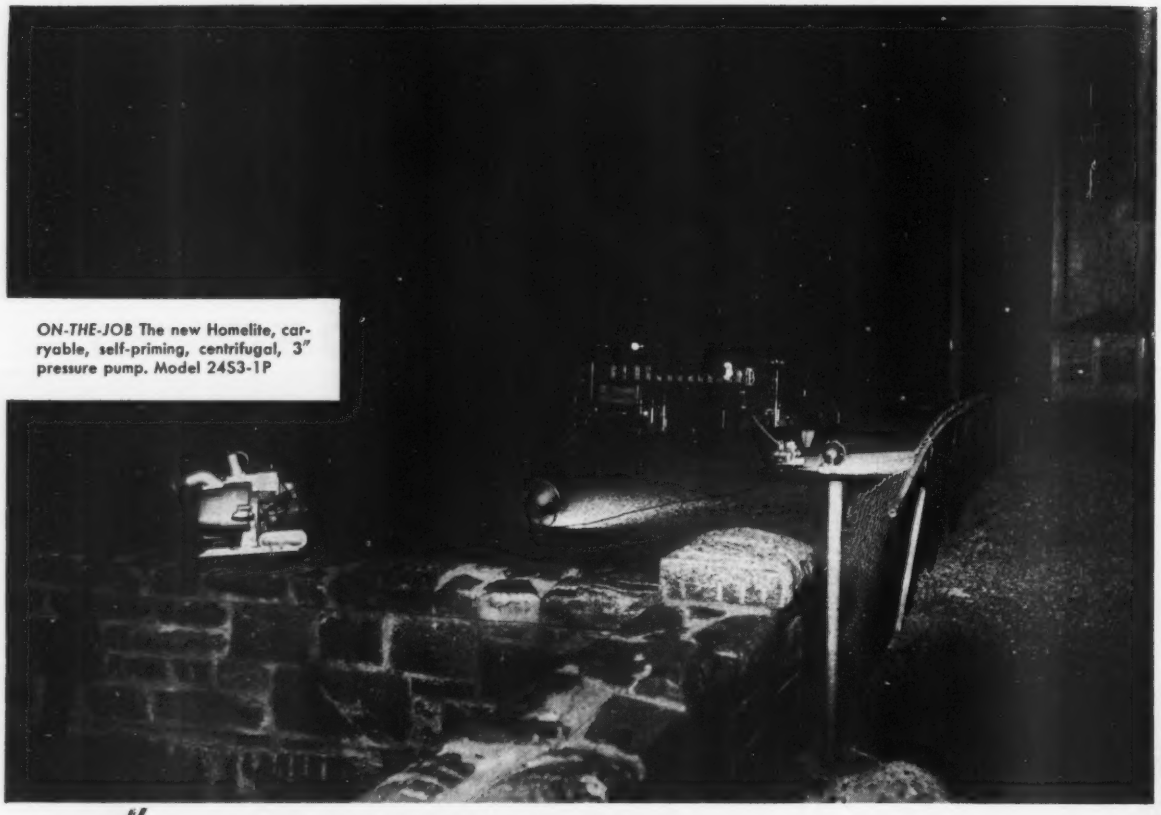
Chassis by Cadillac

The swoop and beauty of passenger-car styling, *plus* rugged efficiency! It's the Criterion-styled 1957 Superior ambulance. You'll find the emergency coach for your needs among three beauties . . . the sleek, low Beau Monde, the Standard ambulance and the Super-Rescuer. All three feature the safest construction in the industry, with chassis and power plant by Cadillac. See the Superior *now!*

SUPERIOR COACH CORPORATION • LIMA, OHIO

SUPERIOR 1957

Tomorrow's Emergency Coach...today!



ON-THE-JOB The new Homelite, carryable, self-priming, centrifugal, 3" pressure pump. Model 24S3-1P

New HOMELITE High-Volume Pressure Pump

Carryable • Non-Clogging
Specially Designed for Fire Fighting

SPECIFICATIONS

Pressure P.S.I.	Gallons per Minute
75	40
70	55
60	85
40	145
Open Discharge	205
5 ft. lift	

Automatic Priming: 5 feet in 15 seconds; 15 feet in 25 seconds
Total Lift: Guaranteed for 28 feet
Total Head: 185 feet
Weight: 107 pounds
Size: 3" Suction and Discharge

Give your fire department the edge in fire-fighting effectiveness with this new, Homelite high-volume, centrifugal pressure pump.

Use it for direct fire fighting, filling booster tanks, and feeding pumpers from wells and streams . . . or for any other job that requires dependable, high-volume, pumping performance. The Homelite Model 24S3-1P weighs only 107 pounds . . . carries easily over rough ground to where you need it most. Lightning fast, automatic priming gives you pressure in seconds . . . with a guaranteed suction lift up to 28 feet.

Powerful Homelite 2-cycle Engine starts in a flash . . . in the coldest, hottest or wettest weather. It will operate at top efficiency for long, dependable service life with minimum maintenance.

Ask for a free demonstration. Your nearby Homelite representative will be happy to show you the 24S3-1P in action. Call him today.

Manufacturers of
Homelite Carryable Chain Saws and Pumps, Generators, Blowers

PERFORMANCE · DEPENDABILITY · SERVICE

HOMELITE

A DIVISION OF TEXTRON INC.
304 RIVERDALE AVE., PORT CHESTER NEW YORK
Canadian Distributors: Terry Machinery Company, Ltd.

DEFEND YOUR COMMUNITY

ONLY IN CONTINENTAL RED SEAL WILL YOU FIND ALL THIS:

- FULL-LENGTH WATER JACKETS
- PATENTED INDIVIDUAL PORTING
- TOCCO-HARDENED COUNTERBALANCED CRANKSHAFT
- SEVEN MAIN BEARINGS
- ALLOY STEEL VALVE SEAT INSERTS
- LEAKPROOF WATER PUMP
- BUILT-IN OIL COOLER
- POSITIVE CRANKCASE VENTILATION
- POSITIVE ROTATION EXHAUST VALVES

CONTINENTAL RED SEAL ENGINE

—with Equipment Using CONTINENTAL POWER EXCLUSIVELY

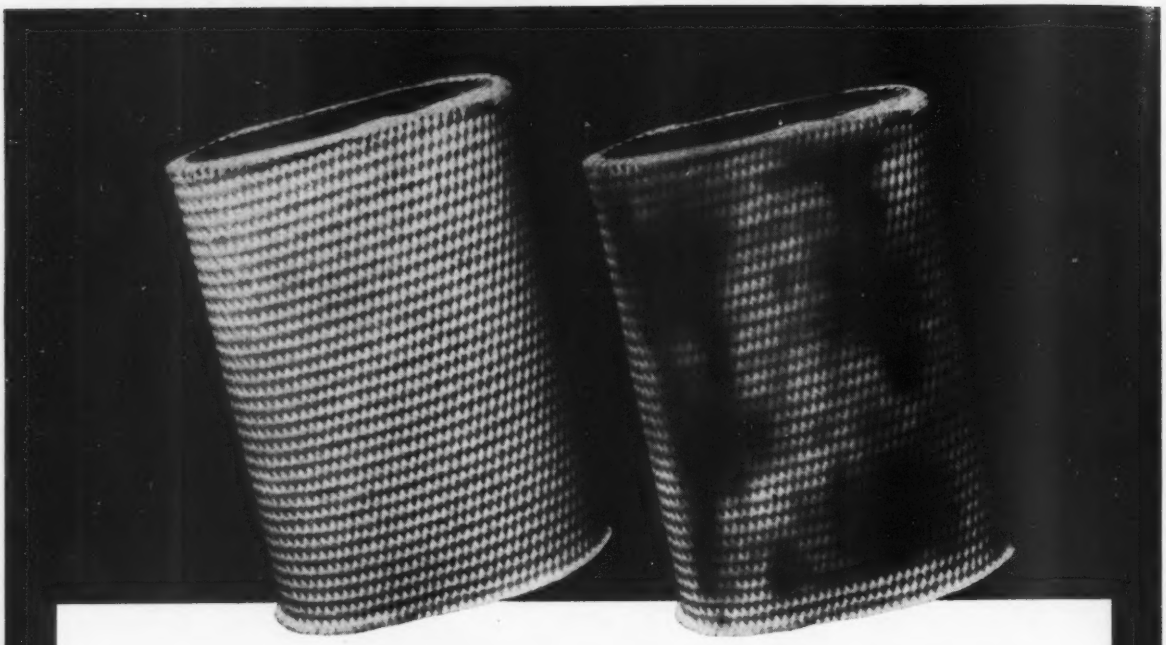
Fire apparatus is subjected to the sort of usage which underscores the need for extra care in its choice. Here, as in any field where round-the-clock reliability is a must, it's wise to standardize on a leading make—a make that features Continental Red Seal power. Red Seals are the product of more than a half-century of specialized experience. Every model is engineered expressly for its work . . . and backed by service and genuine Red Seal parts throughout the globe.

POWER SPECIALISTS SINCE 1902

Continental Motors Corporation

MUSKEGON • MICHIGAN

6 EAST 45TH STREET, NEW YORK 17, NEW YORK • 6218 CEDAR SPRINGS ROAD, DALLAS 9, TEXAS • 3817 SOUTH SANTA FE AVENUE, LOS ANGELES 58, CALIFORNIA • 1252 OAKLEIGH DRIVE, EAST POINT (ATLANTA) GEORGIA



WHAT MAKES THE DIFFERENCE IN THESE TWO?

Provar treatment! That's the difference.

Saturated with water, both samples were exposed to moist atmosphere, under conditions favorable to growth of mildew . . . *for six months, day and night.* The unretouched photos dramatize the effectiveness of the treatment.

Provar is an exclusive process developed by Republic Rubber for prevention of mildew and rot on Fire Hose. The six-month test confirmed the many, many service records that Provar treatment will not wash out or lose its effectiveness.

Illustrated below—the four fine grades of Municipal Fire Hose made by Republic Rubber. All are supplied with Provar protection against mildew and rot.

GOOD FIRE HOSE BY REPUBLIC RUBBER

CHAMPION—Dacron filler, test pressure of 600 lbs. Best grade Fire Hose made.

TOWER — Dacron filler, test pressure of 400 lbs.

CHARIOT — Cotton yarn, test pressure of 400 lbs.

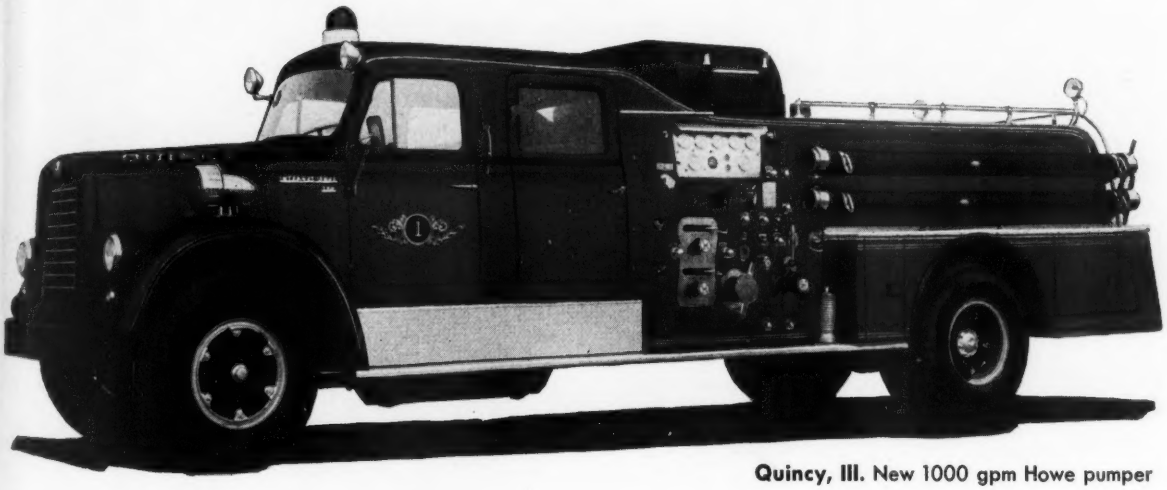
TARGET—Cotton yarn, made to meet demand for heavy-duty hose at moderate cost.

REPUBLIC RUBBER DIVISION

LEE RUBBER & TIRE CORPORATION, YOUNGSTOWN 1, OHIO

INDUSTRIAL RUBBER PRODUCTS

HOWE *offers Another Big Advantage*



Quincy, Ill. New 1000 gpm Howe pumper

Large Pumping Capacity on Commercial Chassis

With delivery of a 1000 gallon pumper to Quincy, Ill., and twin 750 gallon pumpers to Jefferson City, Mo., Howe becomes first to supply fire fighting equipment on the new International Harvester 257 HP chassis with V8 engine. Quincy apparatus has the famous Howe dual pumper with 1,000 gpm Waterous Electro-Matic fully power controlled pushbutton operation and a Myers 60 gpm at 800 psi power takeoff pump. Both pumps can be operated simultaneously. The Myers pump can be used while the truck is moving to fight grass fires. Other equipment includes foam system . . . hose reels enclosed in steel housing, fully heated as are both pumps . . . a 300 gallon booster tank . . . 6-man sedan type cab . . . spacious center rear and running board compartments for miscellaneous equipment.

Jefferson City's twin pumpers have 750 gpm Waterous Electro-Matic pumps, complete foam and wet water systems, plus other features incorporated in the Quincy truck. All three pumpers have ball type fingertip control valves that open quickly under any pressure. Large capacity pumpers mounted on commercial chassis like these give the advantage of servicing by local dealers who can obtain spare parts quickly. Many well known chassis are available with engines fully capable of handling 1000 gpm with ample horsepower reserve. Investigate the advantage of having Howe superior equipment on these powerful modern chassis. Before you buy, call Howe!

Jefferson City, Mo. has been supplied these high powered twin 750 gpm pumpers by Howe

HOWE

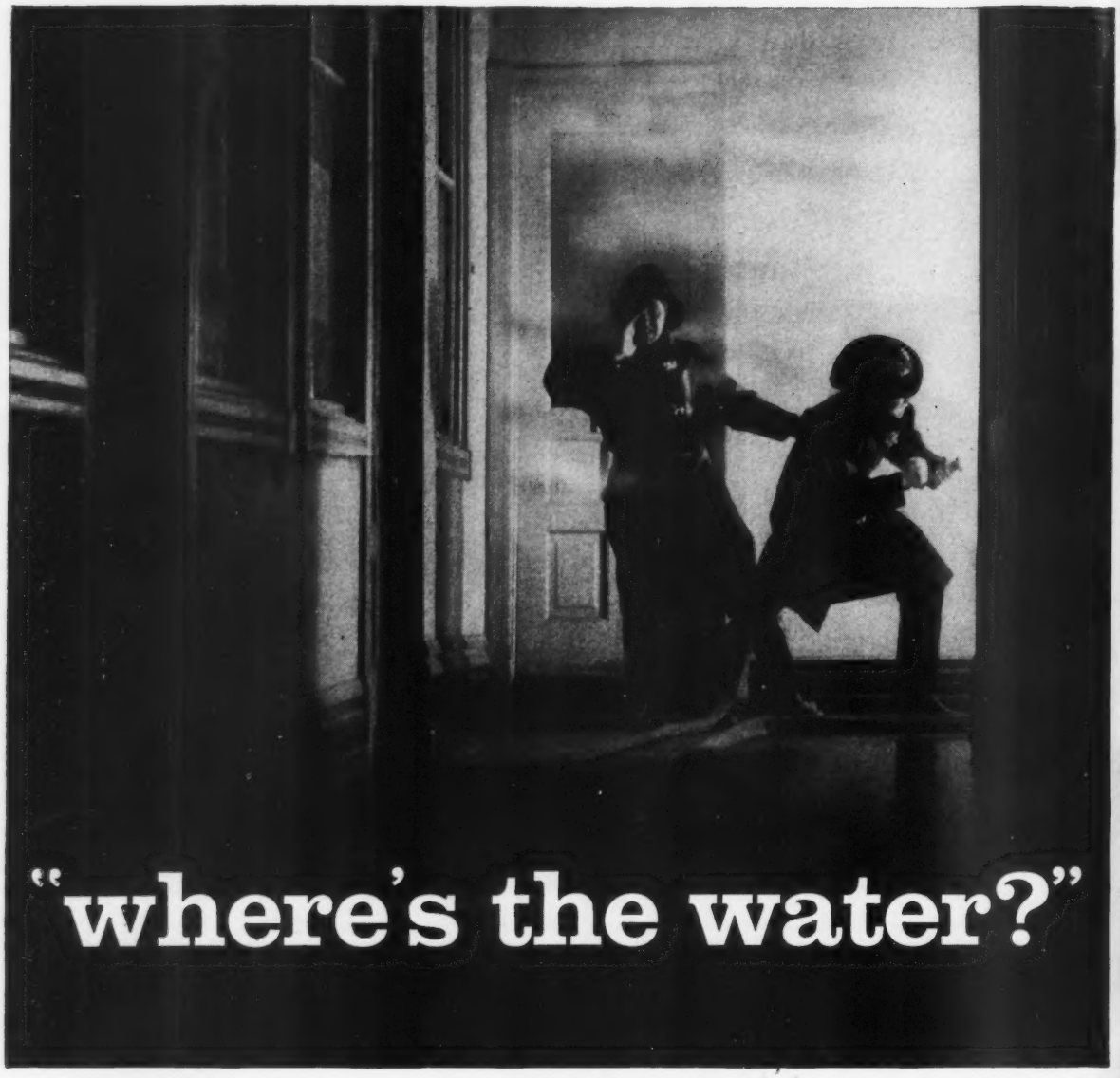
HOWE

Member FAM
(Fire Apparatus Manufacturers Association)

"dependable fire apparatus since 1872"

FIRE APPARATUS COMPANY

Dept. FE47, 1400 W. 22nd Street, Anderson, Indiana, U.S.A.



new Waterous *Electro-Matic pump gets water to the fire in less time

The *Electro-Matic* is the first fire pump to offer power operation for all major pump controls. You get into action faster, during those precious early minutes. You start pumping without lost motion. New Waterous *Electro-Matic* gives you push-button controls that reduce the chance of error and offer greater protection to personnel. Main pump is engaged at the flip of a switch; the powerful rotary-gear primer goes into action with the push of a button; "open" and "close" push-buttons unlock, reset and lock the discharge valves; a simple "volume-pressure" switch sets the transfer valve. And that's not all. The *Electro-Matic* is an entirely new pump in design. It weighs less, requires less space and can be mounted in a variety of methods to meet requirements of all modern chassis. All this plus the features that have made Waterous pumps famous such as horizontally-split, *two-piece* case and full ball-bearing construction.

Free Booklet gives complete details. Your copy by return mail. Send for it today.

Pat. Pend.

WATEROUS *Electro-Matic*

80 E. Fillmore Ave., St. Paul, Minn.
Dept. 303

*Registration applied for.

Electro-Matic Model CM, 1000 GPM, Class A. 500, 750 GPM, 2 or 3-stage models available.

DUO Safety

FIRE LADDERS

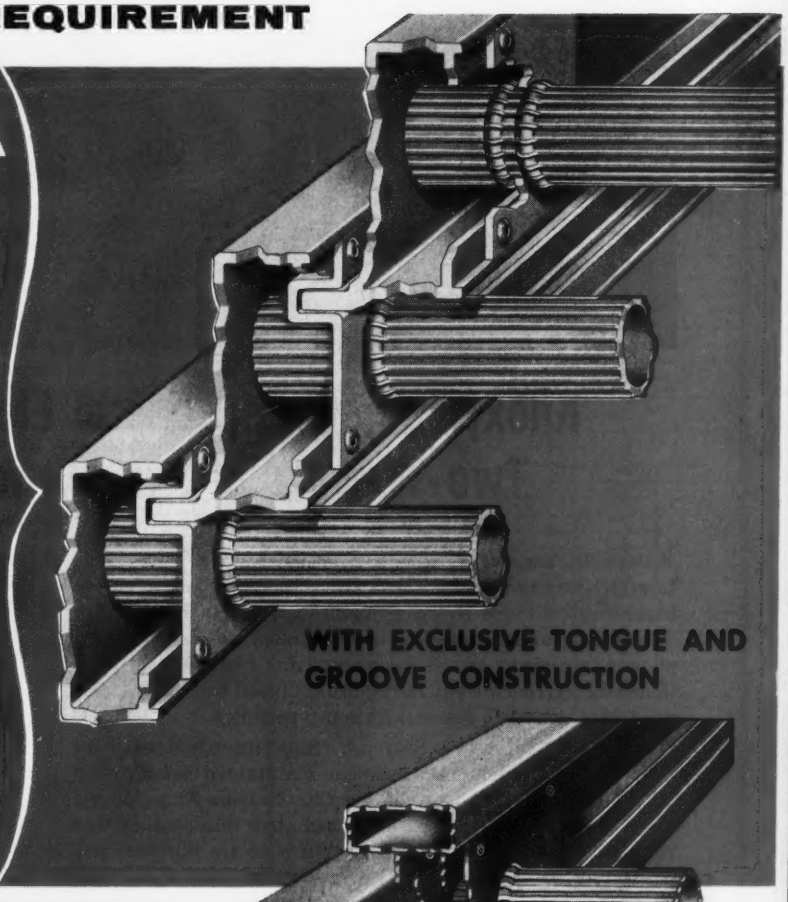
NOW...YOUR CHOICE OF AN ALUMINUM FIRE LADDER FOR EVERY USE... EVERY REQUIREMENT

SERIES 1000-A
For Pumper Use

Featuring lightweight Channel Rail Con-ction, and is the substitute, in aluminum, for d side wood ladders. This outstanding fire der has exclusive tongue and groove arrange-t, Duo-Safety's construction development holds sections together firmly, rigidly, with nooks, guides, or obstructions of any kind! uires minimum banking height. In two and e sections, in lengths up to 30 feet. Rail di-sions—1¼" x 2¾".

SERIES 900-A
or Service Trucks nd Pumper Use

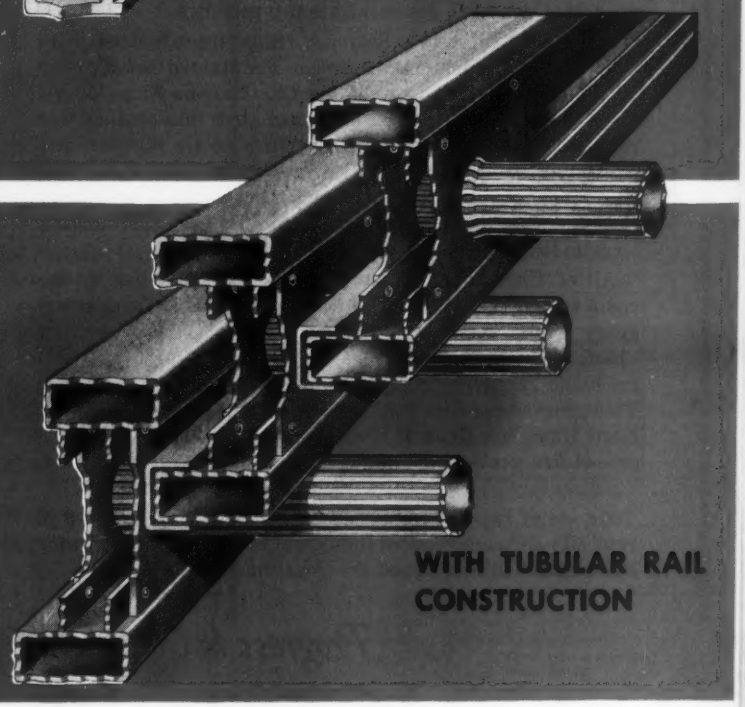
An intermediate ladder in both size and ght, the 900-A Series features slightly heavier truction than the 1000-A Series, but has the e outstanding features. In two and three sec-s...in lengths up to 40 feet. Rail dimensions 1¼" x 3¼".



WITH EXCLUSIVE TONGUE AND GROOVE CONSTRUCTION

SERIES 500-A
For Service Trucks

Famous aluminum fire ladder that replaces od truss ladders and features Tubular Rail onstruction for greater strength and extraor-ary safety. Adopted as standard ladder equip-nt by fire departments the country over. Made roof and wall ladders...and in two and three tion extensions in lengths up to 65 feet.



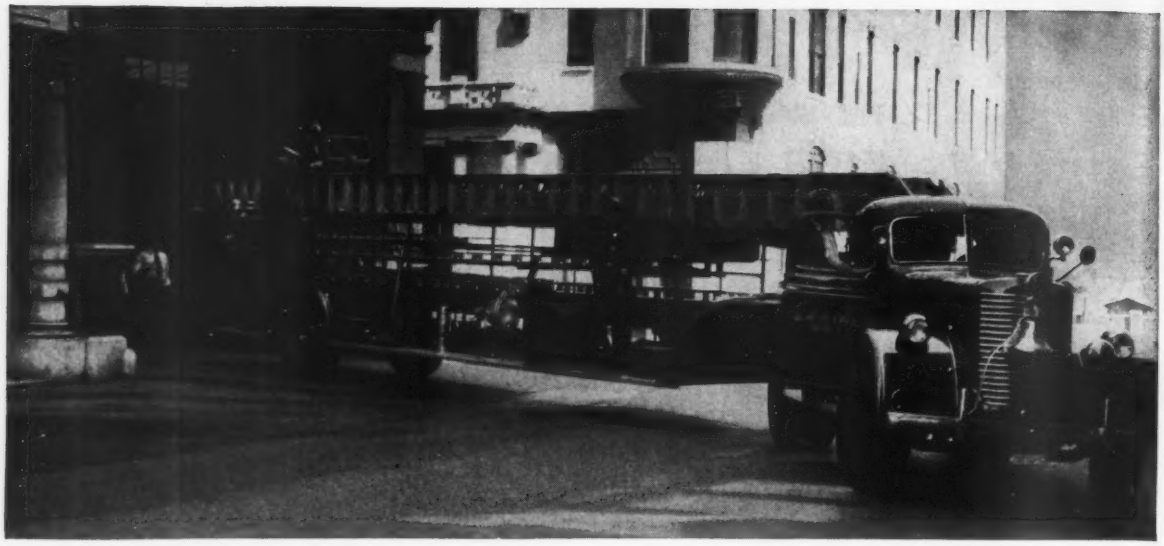
WITH TUBULAR RAIL CONSTRUCTION

DUO Safety

DUO-SAFETY
LADDER CORPORATION

809 NINTH STREET
OSHKOSH, WISCONSIN

In Canada: LaFrance Fire Engine and Foamite, Ltd., Toronto



Knoxville selects General Electric Progress Line Two-Way Radio System for fire protection

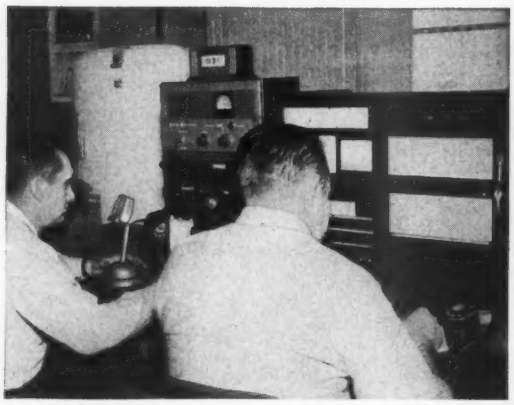
Knoxville, Tennessee, selected General Electric's Progress Line two-way radio for its Fire Department because it offers highest reliability with lowest maintenance cost. High fidelity communication is assured by the controlled reluctance microphones, standard on all Progress Line radios. And only General Electric two-way radios are equipped with G600 series pre-tested, long-life communication-type tubes.

According to James Swanner, Superintendent of Fire Alarms, solid radio contact can be maintained between his base radio station and that of the Chattanooga Fire Department—114 miles away. He explained that this contact was requested by Civil Defense authorities to tie together fire fighting facilities of the two cities in event of disaster. General Electric Communication Engineers placed the Knoxville base station atop a ridge several hundred feet above surrounding terrain, to assure meeting the CD requirement.

All of Knoxville's fire stations are tied together by the radio system. In addition, 15 engines, a Civil Defense emergency truck, ambulance, and cars of the Chief, Assistant Chief, Superintendent of Fire Alarms, two inspectors, and a mechanic are now smoothly coordinated by two-way radio. This progressive Fire Department has already demonstrated many times how General Electric two-way radio provides improved fire protection for the Knoxville metropolitan area.

* * *

Your use of two-way radio can save money for taxpayers in your city through reduced municipal fire insurance rates for cities with radio-equipped fire departments.



Dispatchers at Knoxville Fire Department Headquarters handle all telephone and two-way radio coordination. All fire station and key vehicles are coordinated via new General Electric two-way radio system.

For Sales and Service . . . see "Radio Communication Equipment" in your yellow pages. Or, write: General Electric Co., Communication Equipment Section C2947, Electronics Park, Syracuse, New York. *In Canada:* C.G.E. Electronics, 830 Landsdowne Avenue, Toronto.

Progress Is Our Most Important Product

GENERAL ELECTRIC

At the scene, Preparedness pays in human lives and property saved

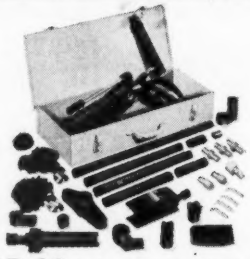
Equip all your vehicles with a proven BLACKHAWK hydraulic rescue set

Thousands of progressive fire, police, civil defense vehicles and industrial safety departments are equipped with Blackhawk "Porto-Power" hydraulic rescue kits. They have found these vital tools to be priceless aids in emergency situations where entrapped victims must be freed quickly, safely . . . where powerful Blackhawk remotely controlled hydraulic tools demonstrate mastery — pushing, pulling, bending, lifting, spreading, clamping, pressing.

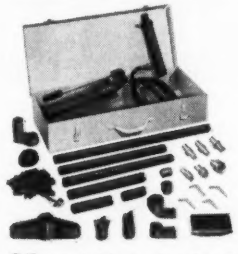
Development of this complete line of rescue sets is credited to these thoughtful and progressive safety experts. They urged and assisted Blackhawk to offer "Porto-Power" rescue kits to all public and industrial safety organizations.

Look over this "Porto-Power" rescue kit contents guide. Then, fill in and mail your order. Tomorrow may be too late!

When seconds are critical you need Porto-Power to force entry, free trapped victims



AZ-30 light duty kit, $141.00



AZ-31 special light duty kit, $99.75

FZ-28 general duty kit, $209.00

FZ-25 heavy duty kit, $374.00

Contents Guide

Standard Porto-Power Rescue Sets

NO.	DESCRIPTION	AZ-30	AZ-31	FZ-28	FZ-25
AZ-1002	3″ Lock-on ext.	1	1		
AZ-1003	5″ Lock-on ext.	1	1		
AZ-1004	10″ Lock-on ext.	1	1		
AZ-1005	15″ Lock-on ext.	2	2		
AZ-1006	23″ Lock-on ext.	1	1		
AZ-1050	Lock-on connector	3	3		
AZ-1051	Male adaptor	2	2		
AZ-1052	Female adaptor	1	1		
AZ-1200	Flat base	1	1		
AZ-1308	Clamp head	1	1		
AZ-1650	Metal case	1	1		
AZ-1900	Lock pin	4	4		
FZ-1002	5″ Lock-on ext.			1	1
FZ-1003	10″ Lock-on ext.			1	1
FZ-1004	20″ Lock-on ext.			2	2
FZ-1005	30″ Lock-on ext.			1	1
FZ-1050	Lock-on connector			3	3
FZ-1051	Male adaptor			2	5
FZ-1052	Female adaptor			1	1
RC-251	10-T Ram with ZR-400 female half-coupler				1
S-73	10-T Hydraulic unit			1	1
SA-4	Wedgie with ZR-400 female-half SPEE-D coupler			1	
SA-6	Wedgie ram	1			
SA-7	Spred ram				1
SA-50	P-400 Pump, RC-540 ram and Z-864 hose assem.	1	1		
Z-5	Chain pull plate			2	2
Z-8	Clamp end toe			1	1
Z-9	Plunger toe			1	1
Z-10	Short connector			1	1
Z-14	Flat base			1	1
Z-16	90° "V" base			1	2
Z-21	Lock pin			8	8
Z-30	Ram toe			1	1
Z-34	Serrated saddle			1	1
Z-128	3¼″ Flex-head			1	1
Z-129	Wedge head			1	1
Z-131	5″ Flex-head			1	1
Z-132	Chain pull plate			1	1
Z-141	7′ chain, hook			2	2
Z-192	Clamp head			1	1
Z-285	Slip-lock ext.			1	1
Z-436	Serrated saddle				1
Z-530	Plunger toe	1	1		
Z-531	Serrated saddle	1	1		
Z-532	90° "V" base	1	1		
Z-539	2¼″ Flex-head	1	1		
Z-545	Short connector	1	1		
Z-557	5′ Chain, hook	2	1		
Z-558	Chain pull plate	1	1		
Z-595	Lifting toe				1
Z-607	Plunger base				1
Z-629	Wedge head	1	1		
Z-650	Slip-lock ext.	1			
Z-668	Z-914 6′ hose, SPEE-D coupler. FZ-1614 ⅜″ coup. assem.				1
Z-1034	Ram toe	1	1		
19523	Wood case				1
19811	Wood case			1	
LX-21	Qt. hydraulic oil				1
ZR-400	Female ½″ SPEE-D coupler				1

"Porto-Power" Rescue Kits — THE HYDRAULIC TOOLS ORIGINALLY SELECTED, TESTED AND USED BY THOUSANDS OF MUNICIPAL FIRE AND SAFETY OFFICIALS!

Fill out and mail your order today!

Gentlemen: Rush me your complete Blackhawk "Porto-Power"

- ☐ Rescue Equipment Catalog HR-300.
- ☐ AZ-30 light duty kit. Price, $141.00*
- ☐ AZ-31 special light duty kit. Price, $99.75
- ☐ FZ-28 general duty kit. Price, 209.00
- ☐ FZ-25 heavy duty kit. Price, $374.00
- ☐ Please have your representative call.

NAME.....TITLE.....

COMPANY OR DEPT.....

ADDRESS.....

CITY.....ZONE.....STATE.....

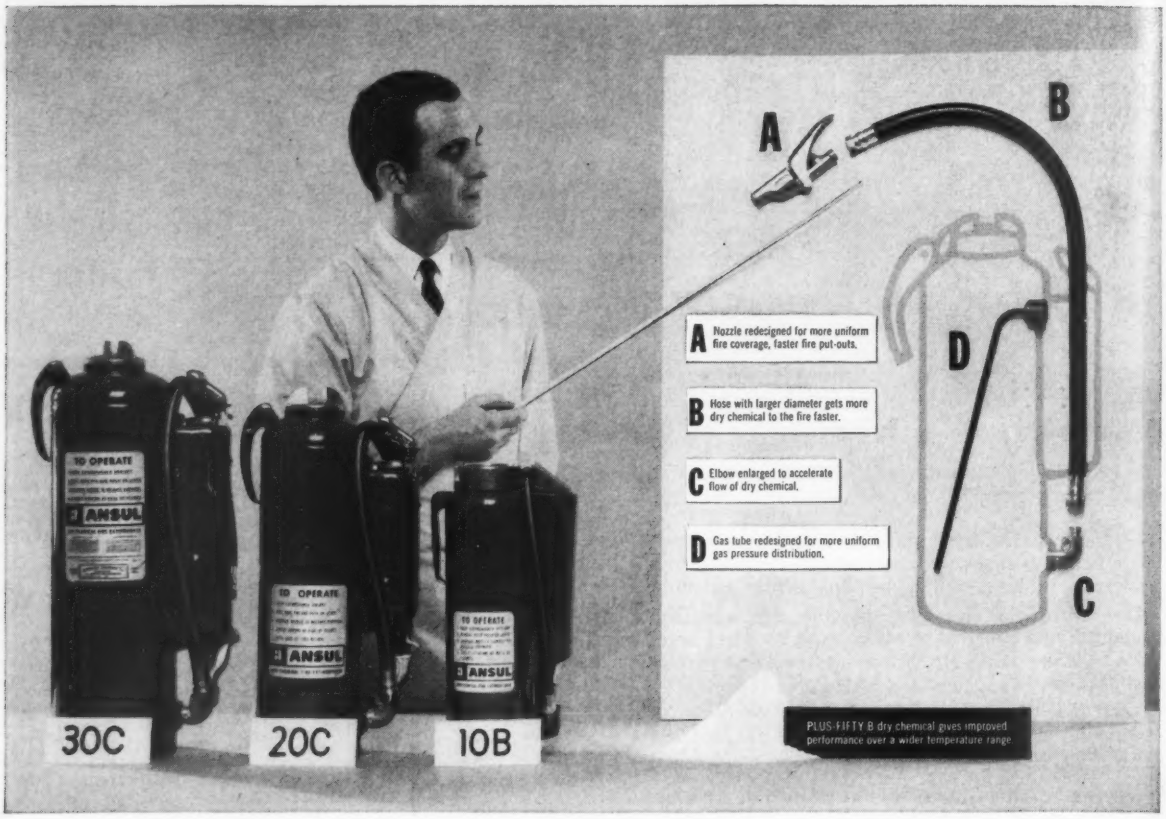
ENCLOSED (CHECK....$.....) (M.O....$.....) (P.O....$.....)

**Prices subject to change without notice. Price includes cost of shipping and handling anywhere in the U.S.A.*

BLACKHAWK®

BLACKHAWK MFG. CO., DEPT. P-6447, Milwaukee, Wisconsin

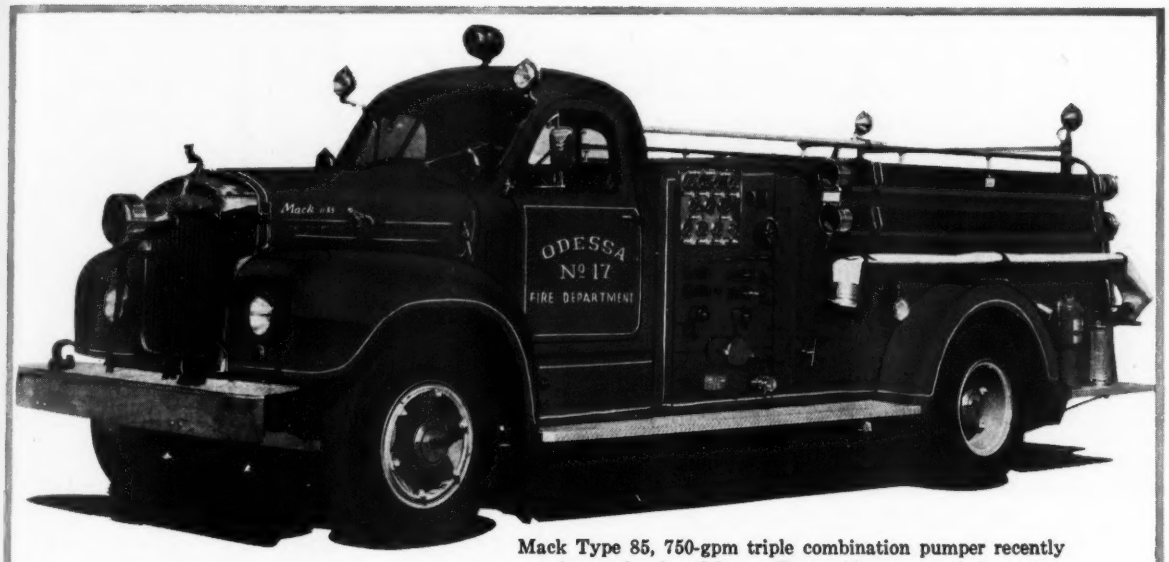
"World's largest manufacturer of hydraulic power tools"


A
B
C
D
A Nozzle redesigned for more uniform fire coverage, faster fire put-outs.
B Hose with larger diameter gets more dry chemical to the fire faster.
C Elbow enlarged to accelerate flow of dry chemical.
D Gas tube redesigned for more uniform gas pressure distribution.
PLUS-FIFTY B dry chemical gives improved performance over a wider temperature range.
30C
20C
10B
ANSUL

Important design improvements in these Ansul Extinguishers give you more fire fighting power at no increase in price. Three years of research and more than 2000 fire tests turned up some significant new information on dry chemical extinguishment. Ansul engineers were able to design these findings into three new extinguisher models, the 10B, 20C and 30C. Result, greatly increased fire fighting power. All Ansul equipment is backed by a five-year warranty. This is the best way we know to say Ansul fire extinguishers are the finest of their kind made anywhere.

ANSUL

The Ansul Chemical Co., Marinette, Wisconsin



Mack Type 85, 750-gpm triple combination pumper recently put in service by Odessa, Texas. Features include a pre-connected rear extra suction inlet, compartments for 700′ of 1½″ hose and 1,250′ of 2½″ hose over a 500-gallon flat booster tank with rear-mounted dual booster reels, and four 2½″ discharge gates on the major pump.

MACK Fire Apparatus gives you "custom-built" confidence

Today's scientific and skillful fire-fighting techniques are important factors in meeting the tougher fire-protection needs of our tremendous residential and industrial growth. Maximum protection also requires fire apparatus that is designed and built to the exacting standards of modern fire fighting. It's the kind of "custom-built" apparatus that Mack can build so well with its unmatched engineering and production facilities.

Mack makes more of the vital parts of its fire apparatus than any other manufacturer—major components like engines, frames, transmissions, axles, and bodies. *Mack apparatus is not assembled from stock automotive components . . . it's "custom-built" to meet your particular needs.*

When you plan for your next apparatus, be sure to compare—not only specifications, but actual design, construction, and performance. Consider also the reputation and experience of the manufacturer. That way you can be confident of getting the best . . . and we're confident you'll choose Mack. Mack Fire Apparatus, Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

4956

MACK

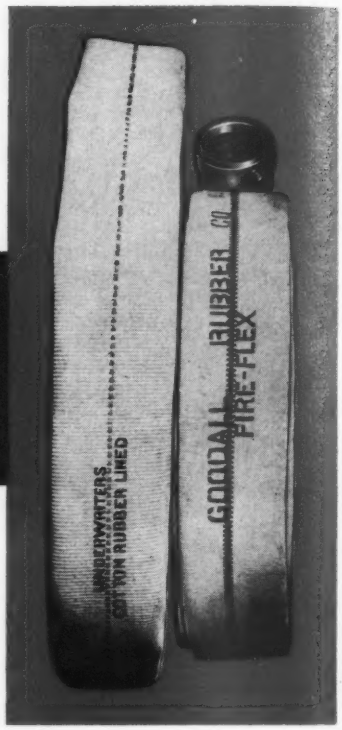
first name for

FIRE APPARATUS

COMPLETE LINE OF PUMPERS—500 TO 1250 GPM...SQUAD AND HOSE WAGONS...65′, 75′, 85′ AERIALS...COMBINATION LADDER TRUCKS

UNDERWRITERS *and* FACTORY MUTUAL APPROVED

GOODALL "EZ flex" THE *Modern* FIRE HOSE



Stronger! Lighter! Longer Lengths!

The greatest advance in fire hose construction in over half a century . . . demonstrating an entirely new concept of fire hose weight, strength and flexibility, made possible by the use of new materials and methods of manufacture.

JACKET—A combination of high-tensile fibres of outstanding strength, woven by a special process, assuring highest resistance to pressure, wear, weather and rough handling. Size-for-size, "Fire-Flex" pressure-resistance is equal or superior to the heavier and stiffer conventional cotton jackets, despite its much lighter weight. The tightly woven fabric is virtually snagproof, and is treated to resist mildew.

LINING—A light-weight yet long-wearing reinforced rubber lining, bonded firmly to the surrounding jacket, and having a perfectly smooth waterway to insure a full, fast flow. In combination, the "Fire-Flex" jacket and lining provide a fire hose far ahead of conventional types in strength, flexibility, durability, ease of handling, and economy.

Makes Fire-Fighting Easier, Safer and More Efficient!

GOODALL RUBBER COMPANY Date_____
448 Whitehead Rd., Trenton 4, N.J.

Send complete information on: ( ) "EZ flex" ( ) "DRI-RACK" ( ) Send representative with samples.

Name_____

Address_____

City_____ Zone____ State_____

COMPARE THE BULK . . . AND THE WEIGHT

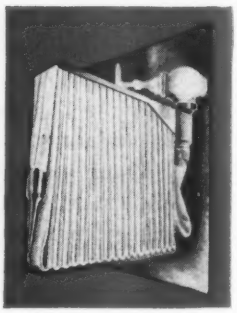
Pictured above: Left—a **50 ft.** coil of Standard Cotton Rubber Lined Fire Hose, weighing **21 lbs.** compared with, right, a **100 ft.** coil of Goodall "EZ flex" Fire Hose weighing only **19 lbs.** What a **difference**—in handling and storage!

★ ★ ★

In addition to its extreme light weight and flexibility, "EZ flex" is designed to withstand, with safety to spare, the highest pressures encountered in municipal and industrial plant fire fighting. Available in continuous lengths of 100 feet, which means fewer couplings. Made in Single Jacket, sizes 1½" to 2½", and Double Jacket, sizes 1½" to 3". Treated to effectively resist mildew and rot.

"DRI-RACK"

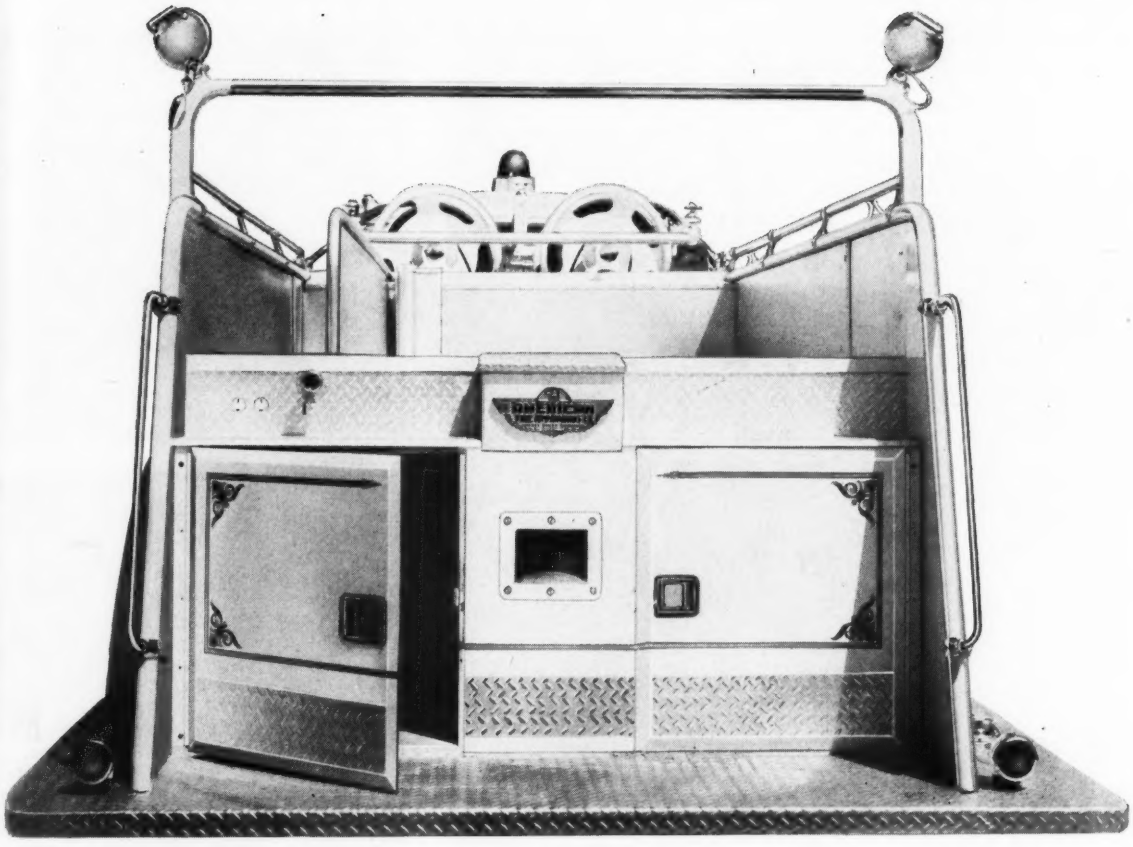
FIRE HOSE—Used in place of Unlined Linen Hose for indoor protection wherever fire hose must be ready for reliable use after long periods of storage. Exceptionally light in weight and extremely flexible . . . folds into smaller space. No "weeping" while jacket is reaching maximum absorption, as with linen hose—**all the water goes on the fire!** The seamless, laminated, reinforced rubber lining is tough and durable, and will stay "alive" for years. SINGLE JACKET, Sizes 1½" and 2½" Maximum length, 100'. **Factory Mutual Approved.**



Standard of Quality—Since 1870 HOSE • BELTING • FOOTWEAR • CLOTHING AND OTHER INDUSTRIAL RUBBER PRODUCTS

GOODALL *Rubber Company*

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.
Branches and Distributors Throughout the United States and in Canada



Beveled compartment doors-an example of *Fine Craftsmanship* on AMERICAN FIRE TRUCKS

Everywhere you look on an American Fire Truck you see "extra features" of fine craftsmanship . . . plus advanced design. These compartment doors, for example, are not only smarter looking—they'll look better longer because exclusive beveled edge construction is more rigid.

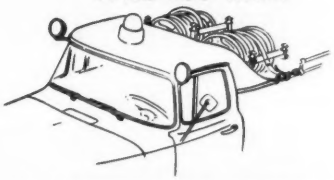
Other typical American refinements are natural-finished native oak hose decks, tubular reinforced edges on body panels for greatest rigidity, and heavily chromed crossbars and grab handles.

From bumper to rear step, American Fire Trucks offer quality features tailored to fulfill your exact requirements. You select the cab style you want, on the size and make commercial chassis you prefer. You choose the capacity of Barton-American Pump you need—from Front-Mounted or Multi-stage Midship models.

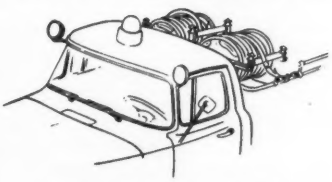
For fine craftsmanship—and practical fire-fighting features—select American Fire Trucks!

Contact your nearest American Representative for full details!

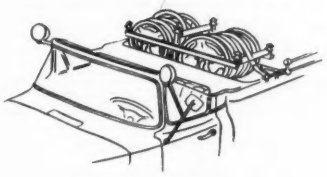
SELECT THE BODY STYLE YOU WANT



STREAMLINED WELDED BODY



STANDARD DELUXE BODY

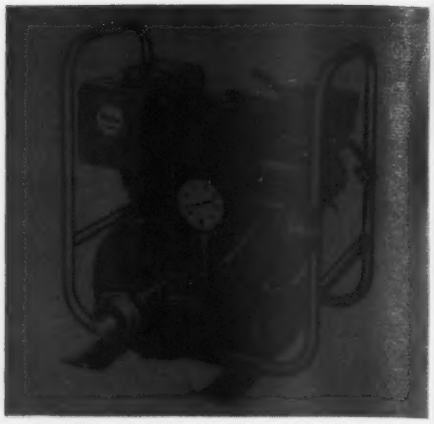


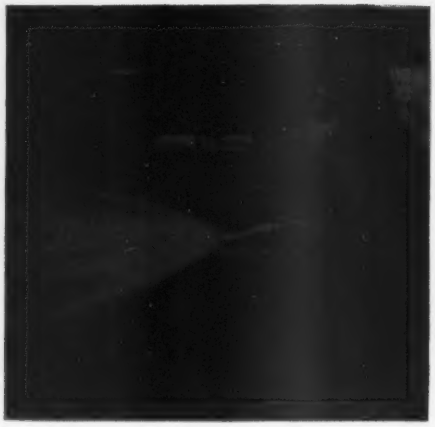
SPORT MODEL BODY

American

AMERICAN FIRE APPARATUS CO.

Main Office: Main Street Rd., Battle Creek, Mich. Plants at: BATTLE CREEK, MICH., MARSHALLTOWN, IA., STRATFORD, ONT.





Dependable Fire Fighting with MARLOW PUMPS

With a supply of surface water, a stream or pond, this portable pump becomes an efficient and light-weight fire fighter. Powered by a dependable four-cycle gasoline engine, it primes itself and starts pumping only 15 to 30 seconds after starting. Highly portable, the Marlow Fire Pump can be placed in a car trunk or jeep and dispatched quickly in an emergency. Because it is easily carried, the pump can be moved to remote areas that a pumper can't reach. On location, it is equally useful for either fire fighting or booster service.

Marlow Fire Pumps provide dependable protection for municipalities, industrial plants, and farms. It is indispensable to Fire Departments. This pump was engineered specifically for the job and has many outstanding features . . .

Exhaust primer — primes pump in 15 to 30 seconds, easily accessible to pump operator.

Lightweight — ribbed aluminum construction withstands high pressures, making readily portable unit. Weighs only 160 pounds with gas and oil, ready to operate.

Compact design—easily placed in small compartments or spaces on any pumper as well as in car trunks, jeeps, or pickups.

Welded-steel runner-type base — makes a rigid mount that can be easily lifted or skidded.

Combination vacuum and pressure gauge — when priming, shows operator whether or not there are leaks in suction hose. When pumping, allows operator to adjust pressure to individual operating conditions.

Dependable four-cycle engine — assures easy quick starting, unattended operation.

Shielded spark plug connection — prevents ignition failure from wet weather or spray.

Protective handles — Wrap around engine and pump and protect vulnerable parts. Handles are extra strong and are placed for convenient carrying.

Remote throttle — mounted on top of engine for easy operation.

Mechanical shaft seal — long-lived, rugged and requires no adjustment.

Automatic check valve — seals off discharge while priming, swings out of way when pumping starts, no hand valve to manipulate.

Fog or foam operation — over 100 pounds pressure available for low pressure fog or foam operation.

For details, literature, or application data, see your Marlow dealer today or write direct for Bulletin F-04.

Marlow PUMPS

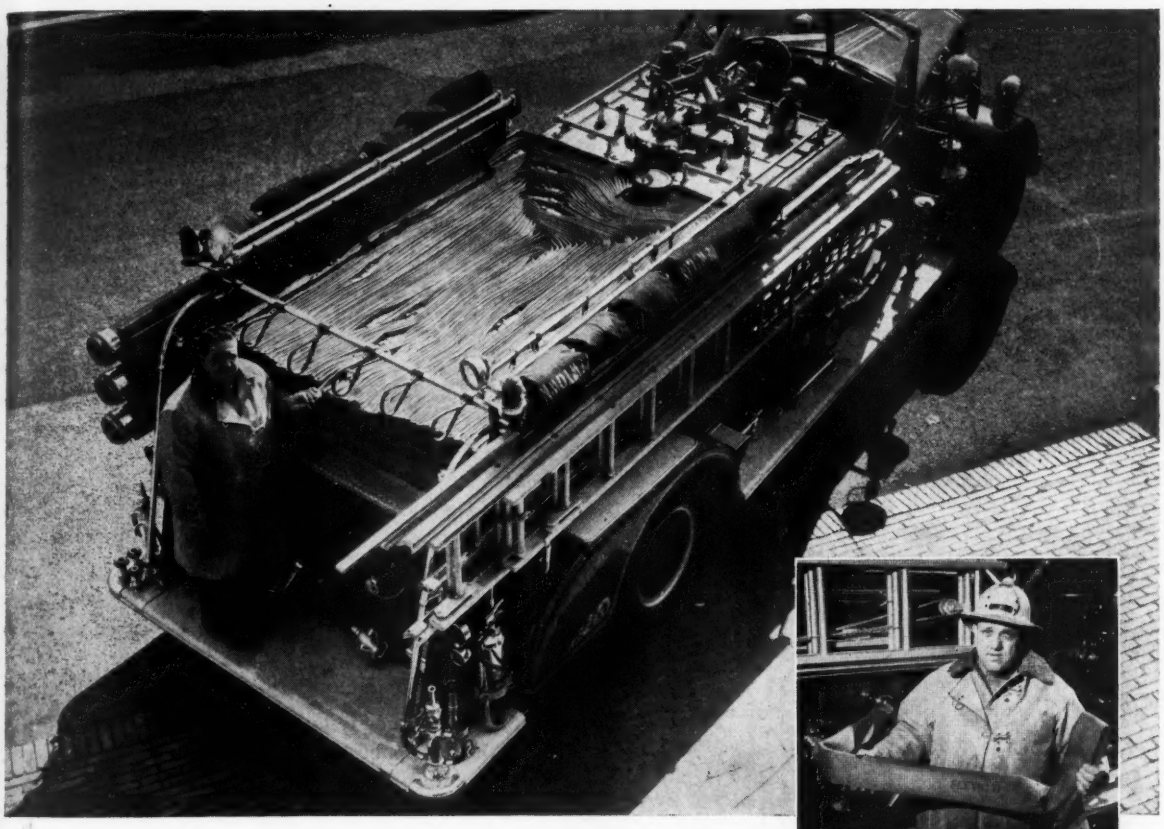
6-227

DIVISION OF

BELL & GOSSETT CO.

Midland Park, N. J.

Morton Grove, Illinois **Longview, Texas**



William S. Ettenger, Chief of Newtown, Pa. Fire Association, demonstrates the lightness and flexibility found in Flexrite Hose. Large photo shows how Flexrite is packed to put 2400 ft. into truck designed for 1400 ft.

WITH HAMILTON FLEXRITE:

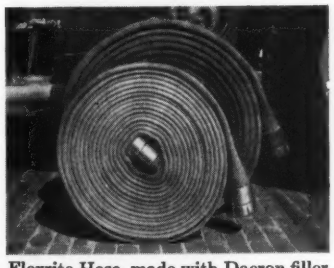
WE GET 2400 FEET OF HOSE IN A TRUCK DESIGNED FOR 1400 FEET

"Nearly twice as much hose in the same space gives this truck the capacity of almost two trucks", reports Fire Chief William S. Ettenger, Newtown, Pa. "We find Flexrite coils in less space, is more flexible and packs easier than conventional hose."

It's lighter in weight, too . . . easier to carry up ladders—gets into action faster. In addition, it's easy to keep clean and dries fast.

OVER 87 YEARS OF SERVICE TO INDUSTRY

Whatever your fire hose problems, it will pay you to write for more information on our complete line of municipal fire hose. Write today—no obligation.



Flexrite Hose, made with Dacron filler cord, placed beside conventional hose illustrates substantial saving in space. Lighter in weight than conventional hose, it is easier to handle, easier to rack.

HAMILTON RUBBER

MANUFACTURING CORPORATION • Trenton 3, N. J.

A Division of Acme-Hamilton Manufacturing Corporation

ATLANTA • CHICAGO • CLEVELAND • HOUSTON • PITTSBURGH • INDIANAPOLIS • LOS ANGELES • NEW YORK • SAN FRANCISCO

740 MAIN, NEWEST UNIT OF TRAVELERS GROUP

Designed by Voorhees, Walker, Smith and Smith. Built by George A. Fuller Construction Company

protected throughout by ADT Central Station

AERO

AUTOMATIC FIRE DETECTION and ALARM SERVICE

Completely modern, this beautiful addition to the home office building group of The Travelers Insurance Company combines safety with efficiency and comfort. Like all other Travelers buildings at Hartford, it is equipped with Aero, the pneumatic rate-of-rise system, which detects fire and summons the fire department *automatically.*

Aero protection covers every floor of every building in the home office group. It extends to the very tip of the famous Travelers Tower, 527 feet above street level. There are 211 Aero circuits comprising approximately 36 miles of inconspicuous copper tubing, 1/12" diameter. Even the ornate ceiling of Batterson Hall presented no problem because Aero does not detract from interior decorations.

Whether your project is large or small, there is an ADT *Automatic* Protection Service to meet every requirement. Thousands of concerns from coast to coast depend on ADT for better protection against fire, burglary and other hazards, *at lower cost.* Our local sales representative will be pleased to discuss your problem. Call us if we are listed in your phone book; or write to our Executive Office.

Controlled Companies of

AMERICAN DISTRICT TELEGRAPH COMPANY

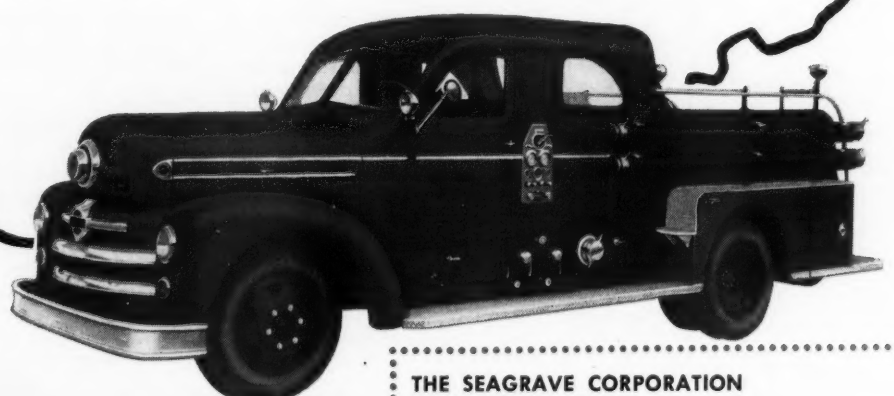
155 Sixth Avenue, New York 13, N. Y.

In Ohio, it's Seagrave

More than 100 Ohio Municipalities are Protected with Seagrave Fire Apparatus . . . and in leading Cities throughout the United States-it is *SEAGRAVE*

Akron	Circleville	Hanoverton	McConnellsville	St. Bernard
Alliance	Cleveland	Hudson	Mt. Gilead	St. Paris
Amelia	Columbus	Huntsburg	Mt. Vernon	Sandusky
Ashland	Columbus-Ternstedt Plant	Ironton	Mt. Orab	Sebring
Ashtabula	Corning	Jackson	Mt. Pleasant	Sharon Twp.
Ashville	Coshocton	Jewell	Nelsonville	Shreve
Athens	Crestline	Johnstown	Newark	Sidney
Austintown	Crooksville	Kansas	New Concord	Silverton
Barberton	Cuyahoga Falls	Kent	New Lexington	Springfield
Barnesville	Cuyahoga Heights	Kenton	Newton Falls	Sugar Grove
Bellaire	Dayton	Lancaster	North Lewisburg	Toledo Airport
Bellefontaine	Defiance	Leipsic	North Lima	Troy
Blanchester	Delphos	Lisbon	North Olmsted	Upper Sandusky
Boardman Twp.	Dennison	Logan	Norwood	Urbana
Bowling Green	Duncan Falls	Loudonville	Oakwood	Wadsworth
Brewster	East Cleveland	Lorain	Oberlin	Walbridge
Bridgeport	East Liverpool	Macedonia	Ottowa	Wapakoneta
Buckeye Lake	East Palestine	Madison Twp.	Oxford	Warren
Bucyrus	Eastlake	Mad River Twp.	Pataskala	Wauseon
Caldwell	Eaton	Madison	Pickerington	Wellston
Cambridge	Euclid	Malvern	Piqua	Wellsville
Camp Perry	Fayetteville	Mansfield	Plymouth	Westerville
Canal Winchester	Fostoria	Maple Hgts.	Pomeroy	West Park
Canton	Gahanna	Marietta	Portsmouth	Wickliffe
Carey	Galion	Marion	Republic	Wilmington
Carrollton	Gallipolis	Martins Ferry	Richwood	Willoughby
Celina	Geneva	Marysville	Rittman	Wooster
Chagrin Falls	Grandview Heights	Massillon	Roseville	Xenia
Chillicothe	Groveport	Milford	Roundhead	Youngstown
Cincinnati	Hamilton	Millersport	Sabina	Zanesville

THE SEAGRAVE CORPORATION Columbus 7, Ohio



SEAGRAVE
THE GREATEST NAME IN FIRE APPARATUS

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- Gamewell system sets into operation, automatically, the dispatching facilities for the entire fire defenses — including all required central office equipment. The fire alarm system is tailored exactly to the Fire Chief's needs and city's fire defense plan.
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FIRE
ENGINEERING

VOL. 110, NO. 4 APRIL, 1957

The Spigot and the Bung

You remember the old saying: "Saving at the spigot and wasting at the bung?"

It would appear that the frantic search for savings and economy within some municipal governments is reaching new heights of absurdity and that their quest is leading some officials to economy measures, so-called, that fit the trite saying to the letter.

Most fire officers who read FIRE ENGINEERING, are familiar with the abortive attempts to save pennies by skimping on manpower in fire departments, expediencies which see a number of communities attempting to consolidate, or integrate local government bureaus, such as fire and police. This is a gamble which has already dearly cost several cities that have experimented with such "spigot-saving" ideas.

The most recent experiment in this direction is the decision of the mayor of Dearborn, Mich., to make firemen out of policemen, and vice versa, and to ultimately do away with its fire department.

The worthy citizens of that city of 130,000 population, and the home of the great Ford River Rouge plant and other industrial enterprises, must have had a shock the night of March 18 last when an unexpected, unexplained explosion occurred in the company's huge frame and cold heading building, killing one worker, injuring 25 others—five critically—and raising the rumor of a serious catastrophe in that vast industrial institution.

Of course the efficient plant fire fighters, trained for specialized fire fighting (and who incidentally, are not expected to double in brass as policemen), quickly brought the ensuing fire under control. But one wonders what would have happened if the plant fire brigade had to call upon the modified, integrated Dearborn fire-police department for assistance, and just how far and how effective that integrated force would have proven, with its police-fire squad station wagons each manned by two police-firemen and two fire extinguishers.

The question is in order, what position will the City of Detroit, and possibly other neighbors of Dearborn, take when it comes to supplying "mutual aid" to that city. Detroit, which only recently has entirely reviewed and reevaluated its suburban fire protection and mutual aid plans, now may have to decide the problem of just how far it can go to fight its neighbor's big fires.

If anyone doubts what may happen, let him read the accounts of the conflagration in Valleyfield and Sorel, Quebec in last month's FIRE ENGINEERING. And while he is at it, let him also study the convincing paper by Fire Chief William L. Miller of Los Angeles, in the February issue of this Journal.

Evidently the mayor of Dearborn and other proponents of penny-pinching, "saving at-the-spigot" who have decided to amalgamate their citys' fire and police forces under a new title, a new set up, with little new idea of *fire defense*—and less conception of *fire attack*, have accepted the statements of a leading consumer magazine on integration rather than the documented reports of experienced fire fighters, fire protection engineers and others who know the *facts* about integration first hand—who have lived it, suffered from it—*and left it.*

But this isn't all the evidence of "spigot-saving and bung-wasting," that in the name of "economy" has been committed within the nation's fire service—and doubtless will continue to be introduced.

The latest astonishing such brain-child comes from another midwest city, not so far from Dearborn, incidentally. Here the fire department—and it is a big one and a good one—is being given the "spigot-economy" treatment by a city manager who has ordered his local fire chief to dispense with his driver-aides—and with those of all other chief officers as well. Let the chiefs drive themselves; put their chauffeur-aides back into companies—and save! is his dictum.

Elsewhere in this number is a letter from the chief of this particular fire department, and our reply. We suggest you read it. And that you pass along this editorial and our answer to the driver-aide problem wherever it will do the most good.

Roi B. Woolley

Fatal Nursing Home Holocausts Emphasize Need of Protective Measures

The fire hazards existing in the nation's homes for the aged, sick and indigent are nothing new. They have been emphasized year after year by the fire loss and mortality statistics. But the void between such hazards and their correction and/or elimination, is apparently as great as it ever was.

The following account of the recent disasters in Council Bluffs, Iowa, and Warrenton, Missouri, which occurred within four days of each other and which claimed 87 lives, although prepared before the findings of the several investigating bodies were at hand, nevertheless provide sufficient evidence to prompt the nation's fire service to concentrate their fire prevention efforts on this vulnerable occupational classification.

Fifteen Dead in Fast-Spreading Council Bluffs Convalescent Home Fire

FIRE SWEPT the Council Bluffs Convalescent Home at 501 Frank Street, Council Bluffs, Iowa, shortly after lunchtime on February 13, leaving 15 persons dead and 14 others injured. All of the dead were patients; of the injured, six were patients and four were attendants.

The nursing home occupied a 25-room former private dwelling built about 1886. The building was of three stories and basement, measuring 57 x 50 feet and was set back from the street on a slight elevation. It was of wood-frame and siding and plaster on wood lath construction. The walls were pierced with many windows, some opening upon the roofs of enclosed porches which housed patients of the home.

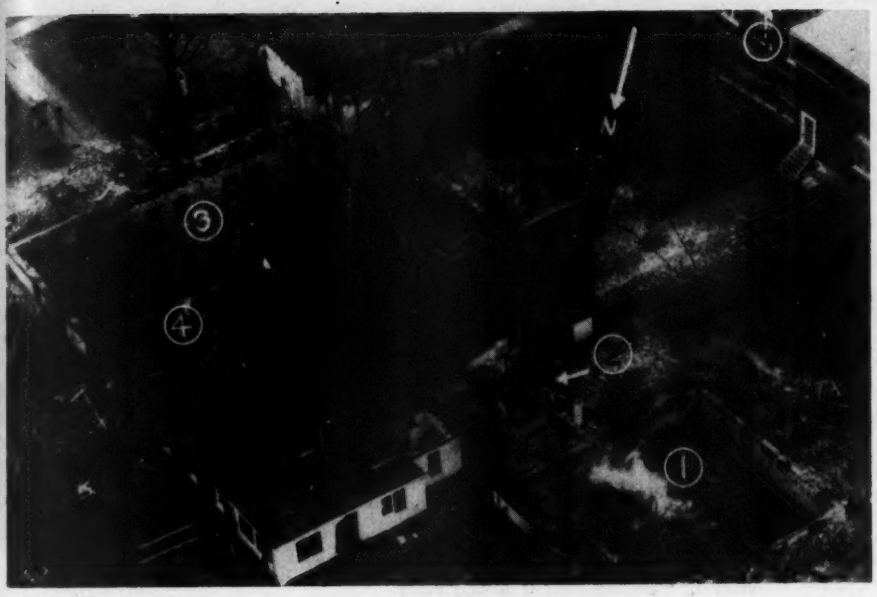
At the time of the fire, it is reported that 30 patients, most of them elderly persons, were quartered on the first and second floors. The third-floor attic contained quarters for the ten attendants, one of whom was confined to her bed by illness at the time of the fire. The basement contained the heating system, storage, and the quarters of the manager, Kenneth Patin and his family.

The home was at one time used as a sanitarium by a group of practitioners known as the "German Doctors." The property was taken over by the present owner, Mrs. Belle Gilmore, in 1942 and converted into a nursing home. In 1949 Mrs. Gilmore turned over the operations of the establishment to her daughter-in-law, Mrs. Charles Gilmore, whose brother Patin, managed the home. The institution reportedly had a good fire record.

There were four stairways in the interior of the building and a single outside stairway, or fire escape, (of wood construction) in the rear, leading from the second story to the ground. Of the interior stairways one led from the kitchen on the first floor to the basement; one ran from the first-floor recreation room to the second story; one from the kitchen to the second story and one from the second floor to the attic. All inside stairways

Continued on page 322

Left: Photographer Jack Kennedy of the "Council Bluffs NonPareil" shot this picture as the first fire company was stretching in. Small one-story frame house (right) was occupied by manager. Apartments below porch were quarters of Mr. and Mrs. Gilmore, owners. Patients were located on second and third floors; attendants on fourth floor (counting basement apartment as first floor). **Right:** Firemen endeavoring to remove victim at door. Note evidence of hot fire at upper right of structure, heavy smoke and strong wind. Photograph was taken shortly after photo at left



Ruins of Katie Jane Nursing Home, Warrenton, Mo., following fire that claimed 72 lives. See diagram and key for details of buildings. Fire originated in annex (ruins in lower right foreground)

Nation's Worst Nursing Home Disaster at Warrenton, Missouri

ON SUNDAY, FEBRUARY 17, just four days after the fatal Council Bluffs holocaust—and at almost the same time of day—fire raced through the Katie Jane Nursing Home in Warrenton, Mo., leaving in its wake 72 dead and a number injured.

The buildings involved occupied a ground area of about 130 by 90 feet. The main building of the home which was arranged in the form of a "U," covered approximately 6,000 square feet (60 x 100). The two-story annex was connected to the main building by an enclosed porch about 23 x 30 feet of one story. This served as a sitting room and visiting room for the inmates.

The nearest exposure hazard was another brick nursing building located 75 feet to the west of the home.

All buildings of the Katie Jane Home were of brick, wood-joist construction. Floors were of two layers of board covered by asphalt tile; walls and ceilings were of wood lath and plaster, covered with several coats of oil base paint. One open stairway led from the first to the second story of one wing of the main building; another stairway, also open, led from the first to second floors on the west side of the main building. In the east side in the men's wing, open stairs led down from the main floor to the ground floor. A single open stairway led from the first to the second floor of the annex. These stairways facilitated extension of the blaze, once it had command of the hallways.

The 65-year-old structure of the home was at one time the Central Western College. When in 1941, the college ceased operations, some of the former college buildings were ultimately purchased by Woodrow O'Sullivan, who converted them into nursing home use.

Escape exits

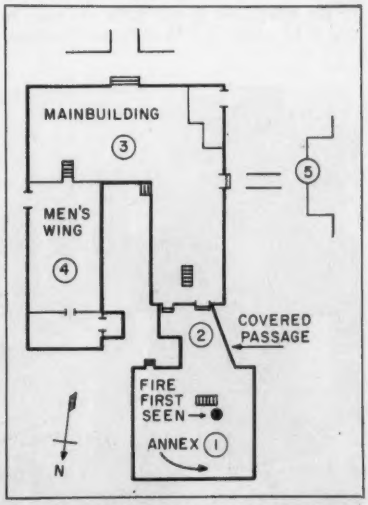
Because there were no outside fire escapes or slides, the only escape from the home's buildings were the two double width and the one single door from the first floor of the main building, and the single width opening to outdoors in the annex. The passageway between the two buildings provided an escape route, providing either or both buildings were not involved by the fire.

The two buildings destroyed contained 67 rooms and four wards. Preliminary reports indicated that at the time of the fire, there were 149 patients* who were distributed as follows: main building, men's ward on the ground floor, 42; first floor, 37; second floor, 34, most of them bed patients; in the annex, first floor, 16; second floor, 18, five of them bed patients. In the passageway were two more patients. The bed patients were located on the second floor instead of the first so that ambulatory patients would not have to use the stairs. Present records indicate that no bed patients survived.

The home was normally staffed with four regular attendants, two each for the main building and annex; however, one report states there was only one attendant for 34 patients in the annex at night. There were also some five or six other employees who performed household work and filled in as nurses' aides as required. None of the attendants were killed but several were injured.

At the time of the fire it is said some of the ambulatory patients were outside the home on the grounds. Being Sunday, a visiting day, a number variously estimated at from 40 to 100 were in the two buildings. Church services were being

* Press reports give the figure as 151.



1. Annex: Two-story and basement, approximately 4,500 square feet. Fire first seen when it broke through ceiling near open stairway
2. Passageway: One story, approximately 700 square feet through which fire communicated to main building
3. Main building: Two story and basement, approximately 6,000 square feet. Undivided structure, contained office
4. Men's wing: One story ground level
5. Exposure: Brick nursing home, 75 feet west. Evacuated, but saved by firemen

WARRENTON, MISSOURI

Continued from page 321

held in the parlor of the annex near the room where the fire was first seen. It is believed all of the visitors made their escape. Some, including the pastor, assisted in the removal of some of the patients.

Cause may never be known

Several possible causes of the fire have been advanced. The first is that it was due to trouble in the electrical system. It was disclosed that the home's license renewal had been withheld because its electrical wiring had not been inspected by a competent electrician. The other theories are careless smoking and arson.

Evidence points to the electrical system as the prime cause. The several investigating agencies agree that the fire had no doubt been burning for some time in the hidden spaces of the walls or ceiling of the first story of the annex. The coroner's jury found on March 4 that the fire was of "undetermined origin."

Delayed notification?

The fire was first noticed by one of the patients about 2:30 p.m. He smelled smoke in the first story of the annex and according to reports, when his warning was ignored he dressed and went outside. At about the same time, one of the visitors saw flames coming from the wood lath and plaster ceiling next to a linen closet located beneath the stairway to the second floor.

Precious time apparently was wasted while the visitor attempted to locate an employee of the home, and for the latter to verify the presence of the fire, then get to the telephone in the main building to use it to notify the Warrenton Volunteer Fire Department. During those critical minutes the hot gases, fumes, and smoke spread so rapidly in the annex and the connecting passageway, that this attendant was unable to return to the annex.

The Warrenton telephone operator pushed the button of the siren to alert the Volunteers, who responded with their two pumpers. By the time the first piece of apparatus reached the fire (estimated at approximately five minutes later), the driver reported smoke was billowing out of the front windows of both stories of the main building. Fire was noticeable in the annex. By that time rescue efforts were impossible.

The available evidence indicates that none of the employees of the home attempted to fight the fire, if we omit the story of one woman who "threw a pail of water on it," then ran. The few-minute interval between the time the alarm was sounded and first fire fighters arrived was a scene of turmoil and confusion, bordering on panic. The first efforts of attendants, aided by visitors, including the pastor, were to evacuate the inmates, many of them helpless. It is said eight patients managed to escape from the first floor and three from the second floor of the annex. All others were trapped.

Despite the individual efforts of attendants to evacuate the helpless occupants of the main building before the heated gases, smoke and fire boiling through the open passageway, could make that undivided structure untenable, many were caught by the onrushing blast. One or two patients were removed by a short ladder from this building before the apparatus arrived, but involvement was so rapid and complete that firemen were able to assist only a few others to safety before they were driven back by flames.

Fire Chief William L. Hannar, who commanded the Warrenton volunteers, lost no time calling for outside assistance. Responding were fire forces from Wright City, Wentzville, Hawk Point, Troy, Washington, Montgomery and Elsberry City. A detachment of military police also responded to aid the 30 State Police sent to the scene. They were followed by members of the Red Cross and Salvation Army. All they could do was to care for those who escaped, most of them without any belongings, many of them badly burned—and all of them in a state of shock. Seventy-one bodies were later recovered from the ruins; one fatally injured patient died in the hospital.

Three volunteer firemen were injured, none seriously. Property loss was estimated in excess of $200,000. □□

Warrenton volunteer firemen play stream on shell of men's wing of Katie Jane Nursing Home. Bodies were not recovered until ruins had cooled

COUNCIL BLUFFS, IOWA

Continued from page 320

were open and each had a wood door at the head of the stairs.

The building contained no sprinkler system but an automatic alarm system had recently been installed throughout the entire structure. This consisted of fixed temperature thermostatic devices located in all halls, rooms and closets. It was operated off the 115-volt lighting system and activation of any one of the pick-up devices rang an alarm bell located in the kitchen. There were no direct alarm connections with the fire department, the nearest company of which was located about one and a half miles away.

Warning system failed

It is reported that rewiring of a part of the building had been completed last summer. One report stated that this rewiring did not include the ward, or room, containing patients on the first floor where the fire was first noticed. Reports also indicate that the alarm bell failed to function either at the start of or during the progress of the fire. The alarm system reportedly was checked last December and found to be in working order.

The home was equipped with portable fire extinguishers and it is said some of the attendants had been instructed in their use. However, there is no evidence to indicate that any extinguishers were actually used on the fire.

At the time of the fire, 20 patients, of whom only 13 were ambulatory, were on the first floor, and ten patients, five of them ambulatory, were on the second floor.

Of the ten attendants at the home, seven were employed on a probationary status from a nearby school for feebleminded. The others were the 35-year-old operator of the home, a 70-year-old practical nurse, and one other woman.

There is no evidence to indicate that the attendants, particularly the seven probationary women, had received any training in meeting fire emergencies. Officials of the fire department are quoted as saying it would have been useless to attempt to teach emergency evacuation proce-

dures to many of the probationary attendants.

Nearly all of the patients were over 70 years of age and even the ambulatory cases could not be called active. Of seven women victims, only one was under 70, the balance being 82 or over. One was 92. Male victims were somewhat younger, the youngest being 58, the others all over 70.

Cause of fire in doubt

The precise origin and the cause of the fire are in doubt at this writing. It is known that the fire was first noticed around the baseboard beneath a first-story window, in the vicinity of a junction box located in the wall. One account locates the origin at a point beneath the floor where an uninsulated low pressure pipe was in contact with wood joists.

Flames broke out around the baseboard, beneath a window in the first floor ward containing four beds. Employees of the home were just sitting down to lunch when a woman patient sounded a bell and someone called "fire!" One of the attendants, a laundress, Mrs. Zeta Leap, ran to the ladies room and found the curtains of the window over the outlet in flames. Other attendants sent to the basement for Mrs. Charles Gilmore, the operator of the home; upon her arrival she told Mrs. Leap to call the fire department. The latter telephoned "Send all fire equipment and ambulances!" and then joined with other attendants in helping to remove some of the patients. Mrs. Gilmore hurried to the ward and jerked down the flaming curtains, after which she endeavored to extinguish the burning clothing of a patient whose wheel chair had been located close to the point where fire broke out of the wall. She then assisted in removing this victim to out-of-doors.

Meantime, the fire engulfed the entire room, spreading from curtain to curtain of the five windows and to bedding, clothing and other combustibles in the congested ward. It was given impetus by the draft created when a picture window broke from the heat and the flames were spurred by a 35-mile wind.

By the time Mrs. Gilmore returned to the interior, the fire had spread outside of the room where it was first seen. She hurried up the stairs from the recreation room and reportedly shut the door which had been wedged open at the top of the stairs.

Reports are contradictory, but it is believed attendants again blocked open the door to this stairway at the second floor to facilitate removal of patients, but the heat and smoke forced them to flee before they could remove the bedridden.

The three small Patin children were safely removed from the basement by two attendants. Other attendants managed to lead, carry, and drag many of the first-story patients to the outside, before the heat, smoke and fumes forced a halt in rescue operations at that point. The single employee in the attic escaped down the rear outside fire escape. Firemen, after they arrived, were able to remove two patients, who had gotten as far as the second-story porch, from their precarious position by means of the outside stairway. These were the only two of the ten patients on the second floor to survive.

Conclusions

The factors which contributed to the death toll in the Council Bluffs and Warrenton nursing home fires were not unusual or exceptional. They have been present to more or less degree in nearly every fatal fire in such occupancies. They have been pointed out year after year, by fire chiefs, and fire protection and safety engineers. They have inspired countless regulatory measures, most of which never become laws, or if they did, lacked "teeth" to make them effective.

Measured against the approved building exits code and fire prevention recommendations advocated by the National Fire Protection Association, National Board of Fire Underwriters and other authorities, both the Council Bluffs Convalescent Home and the Katie Jane Nursing Home were sadly deficient in fire safety fundamentals, viz:

1. Both buildings were being used notwithstanding certain violations of accepted fire safety regulations. The excuse advanced by some authorities that inmates of the homes would have no other place to go if the institutions were shut down because of lack of safety precautions is hardly tenable.

2. There was no sprinkler protection of either home; competent witnesses affirm that sprinklers would have prevented both tragedies.

3. Stairways were not enclosed, nor were there sufficient cut-offs at floor levels (some cut-offs existed in Council Bluffs property but a door was blocked open).

4. Buildings were not subdivided by firewalls or partitions so that patients from one area could be moved easily into another safer area, in time of fire.

5. Neither home complied with the minimum exit requirements set forth by the NFPA Building Code (or any other official exits code.)

6. There were no outside fire escapes, except for the exterior rear wooden stairway on the Council Bluffs Home.

7. Attendants and other employees of the homes were not trained in mass evacuation procedures, nor were they familiar with the methods of fighting incipient fires.

8. There were no satisfactory interior alarm systems for alerting employees and/or inmates (except of the single bell in the kitchen of the Council Bluffs Home—which failed). Reliance was placed entirely upon the telephone for notifying the fire department.

9. The properties were ill-suited to the purpose for which they were occupied and the combustible curtains, decorations, acoustical materials and other furnishings were not flameproofed.

Firemen fight fire from exterior

It is estimated the first fire fighters were on the scene within five minutes from the receipt of the alarm. But by this time the spreading fire had so involved the building that interior operations were impossible.

Fire Chief Waldo Merrill was at his home eating dinner when the alarm sounded, at 12:43 p.m. He left immediately by car for the home. He reports that when he reached 16th Avenue he could see the fire in the distance. He radioed his dispatcher to ask what had been sent to the fire and ordered more companies dispatched immediately. All city fire forces and equipment, including five engine and one ladder companies, and one rescue squad responded to the alarms.

Testimony to the speed with which the flames ripped through the structure was given by many witnesses. Assistant Chief Ralph Figgins, who was the first fireman to reach the scene—arriving from his home before the apparatus, said, "I got there before the first trucks. Fire had burned through the roof and flames were shooting up. I never saw anything burn so fast in my life."

Fire fighters encountered some difficulty in securing ample water from the 6-inch and 4-inch mains. However, they were able to operate eight 2½-inch hose streams on the fire. The blaze was knocked down by 2:00 p.m. and firemen and volunteers immediately set about locating victims. Five bodies were recovered by 2:30 p.m. all badly burned. Search was dangerous and difficult owing to the burning away of the second and third floors and the collapse of the first floor.

The injured, some of whom escaped with their clothing on fire, were rounded up and sped to hospitals after being given first aid at a station set up on the lawn. Volunteer workers, including Civil Air Patrol, Red Cross, and Civil Defense Auxiliary Police, were at the scene together with some 50 nurses and all possible medical help that could be dispatched by local hospitals.

The proprietor, Kenneth Patin, was downtown at the time of the fire but returned in time to salvage records from the flooded basement-office. □□

Left: In most successful volunteer dwelling inspections men work in pairs, wearing their official uniforms and carrying requisite credentials. Here one of the team describes the hazard while the other records it. **Right:** It's surprising how many hazards and violations of safety regulations can be unearthed by volunteer inspectors, trained for the task. Here a passageway blocked by combustibles is found—and recorded

—Photos by Hirshon Studios

Problems of Volunteer Field Inspections —And Some Successful Solutions

FIELD INSPECTIONS by fire departments have conclusively proved the value of taking the fire prevention story direct to the public, in home, office, shop—even into the schools. The reduction in the number of fires and consequent saving of property—and lives, by such enterprise has been noteworthy.

For the most part, these inspections have been conducted by full-paid fire fighters, as a part of their regular jobs. The efforts of volunteer firemen in the same direction have thus far, been limited to certain types of occupational hazards; *home* fire inspections generally have been considered not within their scope.

The following report is offered in the hope that with this frank discussion of the problems that beset the volunteers—and some professional fire fighters, too—field inspections may be stepped up all along the line.

Legal factors

Possibly the most difficult obstacle to successful inspections by volunteers is the lack of the necessary fire prevention codes, ordinances and other enabling legislation.

The laws pertaining to fire risks do not permit entry into homes without permission, therefore dwelling inspections must be approached from an entirely different viewpoint than inspections of mercantile, and other business and industrial installations.

Fire prevention codes contain minimum safety standards whereby hazards can be measured; lack of such yardsticks of performance may foredoom the inspection program at the outset.

Unless the requirements are spelled out in clear language, it will frequently be found that the men attempting to locate and correct fire hazards will have difficulty, not only in tracking down violations, but in securing their corrections. The inspectors may be accused of being unreasonable in their demands. This may lead to frustration on the part of inspectors and thereby jeopardize the entire campaign.

No community is too small or too large not to have a good, workable fire prevention code.

Personnel problem

Another problem to be overcome is the designation of personnel to perform the inspection work. The smaller the community having a volunteer department the better acquainted are local residents with the volunteers. This acquaintenceship may make field inspections by the latter distasteful. Even if such inspections are carried out and the inspector gains admittance to the home, he naturally will be loath to turn up violations and report them—let alone participate in any legal action that may eventuate to have such violations corrected.

The time element

The element of time presents a serious problem for the volunteer fire department which plans to carry out fire inspections.

The majority of volunteer firemen work during normal daylight hours—the period generally selected for most inspections. More often than not, the weekends are the only available days for inspection activities. Where mercantile establishments are concerned, this period may prove most inopportune due to the normal rush that occurs at this time. However, for many manufacturing and business occupancies, the weekends may be excellent for the purpose. Frequently, plants are not operating at full capacity and the management may welcome the inspectors at the time when disturbances to employees would be at a minimum.

When considering residential inspections, the evening period may prove advantageous. In many cases the entire

household will be at home (consider the power of TV) and the opportunity is ripe to present to the entire family a clear cut case for good housekeeping as it relates to fire safety.

However far-reaching the inspection program is intended to be—whether dwelling, business, industrial, public buildings, etc., the time factor is important. The time of the year, the day of the month and week, and the time of day can help, or hinder the inspection effort. In many campaigns the entire drive is based upon this factor.

The reward element

Another detail that should be considered is the reward element. On the whole, volunteer firemen do not expect to be paid for fighting fire. But when it comes to inspections it may be found that because of the extra time and effort involved, and the scheduled nature of the task, some firemen expect to be paid for their services. Such a condition may be encountered more frequently when state laws require certain standards to be met, and place the responsibility for inspection and enforcement on the communities involved.

Usually, when a volunteer fire department concentrates its joint efforts on a fire prevention campaign in which inspections play an important part, the inspectors are not remunerated. There are various methods of rewarding individuals and companies which make the best showing but such rewards seldom take the form of cash.

On the whole, volunteer fire fighters although they may not relish the idea of inspections, will nevertheless consider such activities part of their responsibilities in reducing the toll exacted by fire, and not expect pay.

In some states, money paid into the volunteer fire department through the two per cent fire insurance premium tax is contingent upon inspection operations performed by the department. In the State of Wisconsin, for example, in order for a fire department to receive the two per cent tax the department must show that inspections have been made of all business, industrial and public buildings in the district.

Some volunteer departments find it expedient to employ an inspector, or inspectors whose responsibility it is to plan and execute fire prevention programs, in which inspections play an important part. These individuals may be retired or exempt fire officers, but generally they are men who at one time occupied leading positions, who know the district covered by the department and are familiar with local, state and other laws relating to fire protection and prevention.

These men devote all or part of their time to these duties, their remuneration mainly being based upon the time devoted to the tasks. The inspector may have that title or some other, such as "fire marshal." He generally wears the fire department uniform. The advantage of having at least one paid or part-paid uniformed fire prevention official is that it relieves the volunteer officers and inspectors of the distasteful task of bearing down on householders who are violating the law, and with whom they might be friendly.

As a typical example, the Village of Jordan, Onondaga County, New York, and the Town of Jordan, which completely surrounds it, have adopted ordinances relating to fire inspections of mercantile and industrial buildings. These local laws supplement present state regulations pertaining to inspections of multiple residences and schools.

In order to implement the local and state regulations, the village board appointed a fireman, Captain Robert E. Milton as inspector. It is his job to inspect all business establishments and industrial plants twice a year. Violations of the ordinance are reported by the inspector to the board, which then takes the proper legal steps for enforcement. The town has also adopted the same procedures and engaged the Captain as inspector.

Captain Milton is paid $150 a year for this extra duty. Frequently he is accompanied on his rounds by members or officers of the fire department in order that as many men as possible may become familiar with the buildings in the village.

Handicaps to home inspections

When approaching homeowners with the idea of inspecting their property, it may be found that the constitutional limitations against unlawful search and seizure are immediately brought up. The old adage "A man's home is his castle" is still adhered to.

It is possible to conduct a public fire safety campaign to acquaint householders with the benefits of residential inspections and in this manner obtain the cooperation of the owners and occupants to gain permission to inspect their premises.

Continued on page 363

Nassau County Fire Commission

MERRICK FIRE DISTRICT

MERRICK, N. Y.

This is to Certify that these premises have been inspected and meet the requirements of the Fire Prevention Ordinance of County of Nassau.

INSPECTED By..... DATE....
INSPECTED By..... DATE....
INSPECTED By..... DATE....
INSPECTED By..... DATE....
INSPECTED By..... DATE....
INSPECTED By..... DATE....
INSPECTED By..... DATE....
INSPECTED By..... DATE....

In case of Fire immediately call the

MERRICK FIRE DEPARTMENT

PI 2-3300

THIS RECORD MUST BE KEPT POSTED

Mercantile and industrial risks in Nassau County, N. Y., must display an official notice which is signed by the inspector. The fire department alarm number is displayed on the placard for quick reference

One way to eliminate rubbish and trash fires is by field inspections. Situations similar to the one pictured here are often corrected on the first visit of the firemen

Putting More Power into Plant Fire Protection

Modern plant fire brigades are being "tailored to fit" — with special apparatus to meet special fire and explosion hazards

By DONALD M. O'BRIEN

Pre-requisites of a plant fire fighting unit

In design, construction and equipment it should be adapted to the particular fire protection requirements of the plant and its fire brigade.

This means—

It should be large enough to accommodate the necessary fire fighting facilities and compact enough to stow and operate in confined spaces.

Preferably it should be self-propelled, easy to steer and handle indoors and out.

AMERICAN INDUSTRY is expanding not only in volume but in complexities. New products appear daily which are the result of new manufacturing processes and new materials. Many of these have their attendant fire and explosion hazards.

At the same time, industry itself is on the move. Shifts in location are taking great plants from the cities to the suburbs, and even into the rural areas, where municipal fire protection is limited or altogether lacking.

This means that today, more than ever before, modern manufacturing plants must be more self-sufficient in the matter of fire protection. This means establishing plant safety forces—squads and fire brigades—on a broader and yet more specialized basis than ever. This in turn, calls for mechanical fire control facilities tailored to meet today's and tomorrow's particular fire and explosion hazards.

The advent of the ultra-modern industrial plant, designed and built to permit all manufacturing operations on a single floor, has also introduced new fire protection problems, one of the most serious of which is the inaccessibility to fire fighters of some portions of the plant. In time of fire, in order to reach all plant areas, extensive hose layouts and the transportation of considerable fire fighting equipment may be required to reach the scene. This calls for mobile equipment carriers of some kind. Two men on a compact, handy little portable unit, getting quickly to the fire with first-aid fire fighting equipment, may successfully extinguish a blaze that could well develop into a conflagration where fire fighters are forced to drag or push their fire fighting gear—or carry it themselves.

Plant protection engineers have discovered that the relocation of a factory, as before mentioned, poses a problem not only to the industrial enterprise directly concerned, but to the nearest fire department whether city, town, village or rural.

Hazards peculiar to that particular plant may be totally beyond the capabilities of the public fire department. The company, therefore, may be faced with the need of creating and maintaining its own complete private fire department. Either that, or it must cooperate with the outside fire forces to see that the necessary equipment is installed on the department's apparatus, or even to supply the apparatus and equipment for the department.

Problems to be weighed

Considering the situations above described, plant management may—and quite advisedly—decide to set up its own private fire brigade.

When planning the organization and operation of a plant brigade, and providing for its necessary equipment, it is considered good policy for the plant safety director to confer with the community fire chief, the plant fire chief, and representatives of the insurance carriers and/or the rating organization having jurisdiction in the area. These specialists can weigh the various problems attend-

The aircraft industry requires specially designed equipment to meet the particular hazards of production and flight testing. This Boeing crash truck carries a 750-gpm midship pump, 1,000 gallons of water and a turret nozzle with a capacity of 4,500 gpm—*American LaFrance Corp.*

ant upon plant fire protection from their respective viewpoints.

The points covered in conference should relate to such details as: (1) the hazards inherent to the manufacturing processes and the materials involved; (2) the location of the plant in relation to the nearest public fire forces; (3) the expected response of public forces in full or in part, from a chronological viewpoint; (4) whether full-time professional firemen or volunteers staff the local department; (5) the size and complexity of the plant layout including the number and kind of buildings involved; (6) the freedom of movement into and through the plant and its yards; (7) the location and accessibility of water supply; and (8) the extent to which the "area" is organized to perform mutual aid in time of serious emergencies.

From the analysis of the foregoing, a program of fire protection should eventuate that will point the way to procurement of proper fire fighting facilities for the plant operations.

With consideration of the hazards to be met, and the fire fighting facilities necessary to cope with the hazards before them, plant safety heads, and fire chiefs, should have little difficulty in agreeing upon the fire protection measures that should be taken by all concerned.

An important point in this connection is the matter of plant mobile apparatus —by this, we mean any portable equipment carrier whether manually or mechanically propelled. Naturally the nature and extent of plant hazards, availability of manpower, etc., measured against these other previously mentioned limitations, should determine the type of mobile apparatus and its related equipment most suited to cope with these hazards.

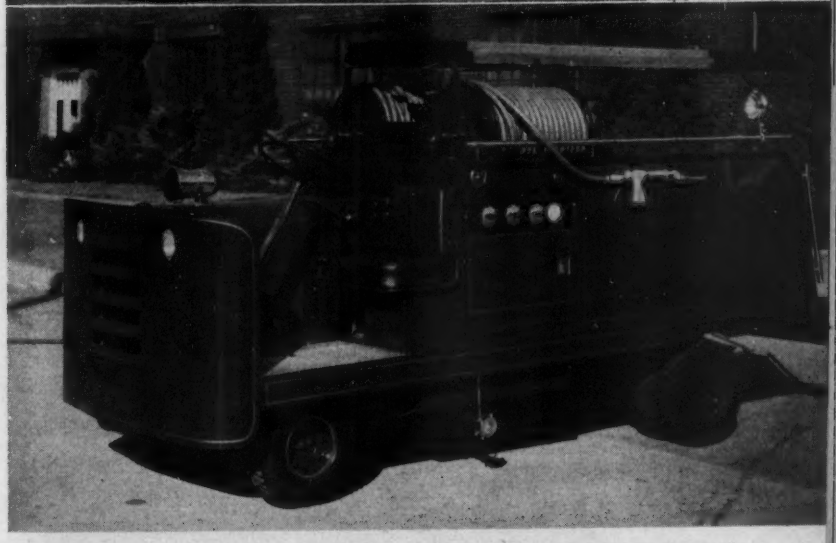
Just as the Armed Forces have their "weapons carriers," so industrial plant brigades should have their fire fighting "weapons carriers."

Industrial units grow in stature

The original plant fire trucks were doubtless adaptations of dollies or other commercial wheeled conveyances for moving goods and materials. They were pressed into service when it was necessary to speed reinforcements of fire extinguishers and fire fighting equipment quickly to where they were needed.

It was natural that with the advent of powered vehicles such as fork-lift, tiny tractors and other self-propelled units, some bright plant safety men would adapt them for fire protection. With the coming of World War II these self-propelled units occupied an important place in civil defense, as well as in the plant fire protection programs. Considerable ingenuity was displayed in the conversion of almost every kind of self-propelled conveyance into fire fighting units.

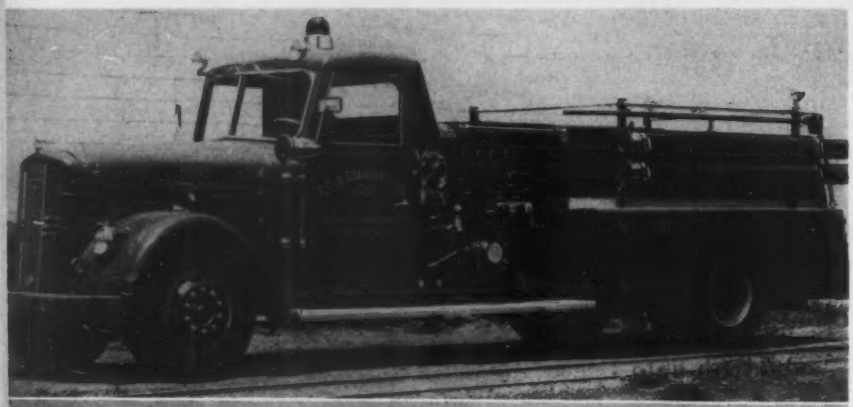
As the value and importance of these power-operated vehicles became better known they assumed different form, and more and more resembled standard public fire fighting units. This was particularly true in the larger plants, where



Top: Versatile truck (on Willys jeep chassis) equipped with front-mount pump, booster tank and hose body can be fitted with foam, dry chemical, CO_2 or other extinguishing agents
—Howe Fire Apparatus Co.

Center: Industrial pumper (on International 4 x 4 chassis) fitted with front-mount pump, both 1½- and 2½-inch hose, 400-gallon booster tank and 20-gallon stainless steel foam tank with suction proportioner
—H & H Fire Apparatus, Inc.

Bottom: Industrial high pressure unit for use in narrow plant aisles, measures 48 inches in width. Powered by a 98-hp engine, it will attain speeds up to 25 mph. Dual booster fog lines are supplied from 200-gallon tank
—John Bean Div., Food Machinery & Chemical Corp.



pumps and hose became regular equipment on plant fire apparatus.

Today, the physical characteristics of these plant fire trucks vary according to the fire safety requirements of the individual plants. In addition to carrying fire fighting tools and equipment, many of these miniature rigs transport fire fighters. Some ingenious vehicles are capable of rapidly moving a full fire fighting crew through narrow aisles of the plant or storage areas.

Generally, the plant hazards involved dictate the kind and type of fire fighting equipment and extinguishing agents and the fire truck itself. Many of the units in service today are miniature municipal hose and chemical trucks. In addition to the required miscellany of hand extinguishers, they may be fitted with special tanks for CO_2, dry chemical, wet water or other extinguishing agents and the hose necessary for discharge. The larger units may carry 1½-inch or 2½-inch hose in compartments, or special hose bed, for coupling to yard or plant hydrants. Industrial occupancies having large out-of-door storages, or fire risks that must be isolated, frequently utilize full scale regulation municipal pumpers with hose and other accessories. And in the very large installations it is not unusual to find these pumpers of 750 to 1000-gpm capacity, manned by full-paid, picked fire fighters.

In factories where pickup, fork-lift or small tow-trucks are available, trailer or pallet units may be improvised into fire vehicles. Located in strategic areas of the plant, they may be quickly towed or carried pickaback to the scene of a fire. Many of these small units are fitted with a motor for powering booster or high pressure pump.

The trend toward campus-style industrial plants, with many separate buildings connected by roadways, is stimulating the use of small municipal-type fire apparatus. In such areas the versatile jeep and various types of utility and pickup trucks are enjoying increasing popularity.

To repeat, standard municipal pumping equipment is commonly found in the heavy industries where full-time fire brigades are maintained. The magnitude of

FROM TOP TO BOTTOM:

A unique proportioning system allows the pump operator to supply either foam or water to any of the eight discharge gates on this industrial pumper
—Ward-LaFrance Truck Corp.

The pickup chassis with front-mount pump is popular for plant fire apparatus. This model (Ford Motor Co.) with a 100-gallon booster tank provides a versatile, fast-moving unit—*American Fire Apparatus Co.*

Crucible Steel Co. of America utilizes a jeep "Little Mo" at their Sanderson-Halcomb Works. Hard-hitting unit can supply high-pressure fog or fog-foam in the booster line, turret gun or ground sweep nozzles
—Army's Fire Service

Heavy-duty foam-maker and pumper has a capacity of 750 gallons of foam liquid and pump proportioning system designed to deliver foam to the rear discharge gates and water to the side gates simultaneously
—Seagrave Corp.

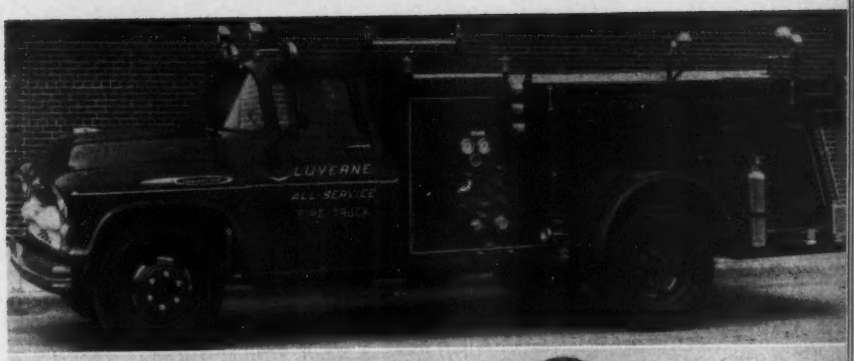
the possible fire protection operations and the number and character of hazards involved, generally dictate the selection of this type of equipment. The most noticeable examples of such facilities are found in the chemical, petroleum, steel, construction and other industries. In each, fire vehicles, together with their fittings and equipment are designed for the particular part they must play in the fire protection plan and program. Many different types are illustrated in this report.

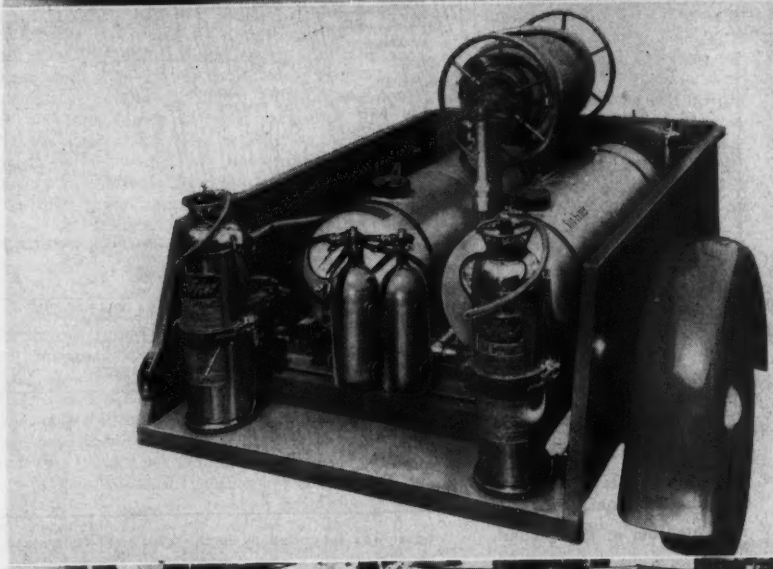
The more specialized the plant fire protection problem, and the more individualistic the fire fighting apparatus and equipment, the more important is the need for training those who will man and operate the facilities.

On the whole, maintenance and operation of such equipment presents about the same problems that face the public fire fighter. But because so many present day manufacturing plants pose special risks, it is essential that plant firemen receive more advanced training in meeting fire and explosion emergencies.

There is another truism of the professional fire service: "The equipment is only as good as the man using it" which applies forcibly to plant fire protection apparatus. Men can only be proficient in the handling of this specialized equipment as they are trained for it. In addition, they should be schooled in driving the vehicles, the routes to all areas of the installation to which they may be summoned and in the operation of pumps, proportioners, nozzles and other fittings. And of course, they should be schooled in operating special chemical discharge systems.

Frequent drills and practice sessions should be held so that all personnel will become familiar with the apparatus and their duties and responsibilities. Here, again, the cooperation and advice of the local fire chief will be invaluable. Whether the plant fire brigade is organized and maintained to meet special hazardous emergencies or for routine normal fire suppression, certain basic fundamentals of fire extinguishment are essential in either case. With the cooperation of local fire officials the plant fire protection problems can be more quickly and satisfactorily solved. □□





FROM TOP TO BOTTOM:

Industrial truck designed for cold weather operation. The booster reels and all operating valves are enclosed in a heated compartment —*Luverne Fire Apparatus Co.*

Chemical trailer contains six minutes' continuous supply of Karbaloy in dual tanks arranged for consecutive use. Extinguishing agent is pressurized by CO_2—*Fyr-Fyter Co.*

In-plant fire truck on a 42-inch-wide three-wheel chassis. Powered by a 14.6 hp engine, it can attain a speed of 15 mph. It carries 300 pounds of dry chemical, 150 gallons of water, with tools and equipment —*Ansul Chemical Co.*

Dow Corning Corporation maintains this industrial pumper for special hazards of its Midland, Mich., plant. It mounts a 750-gpm pump and accessories for discharging several types of chemicals —*Peter Pirsch and Sons Co.*

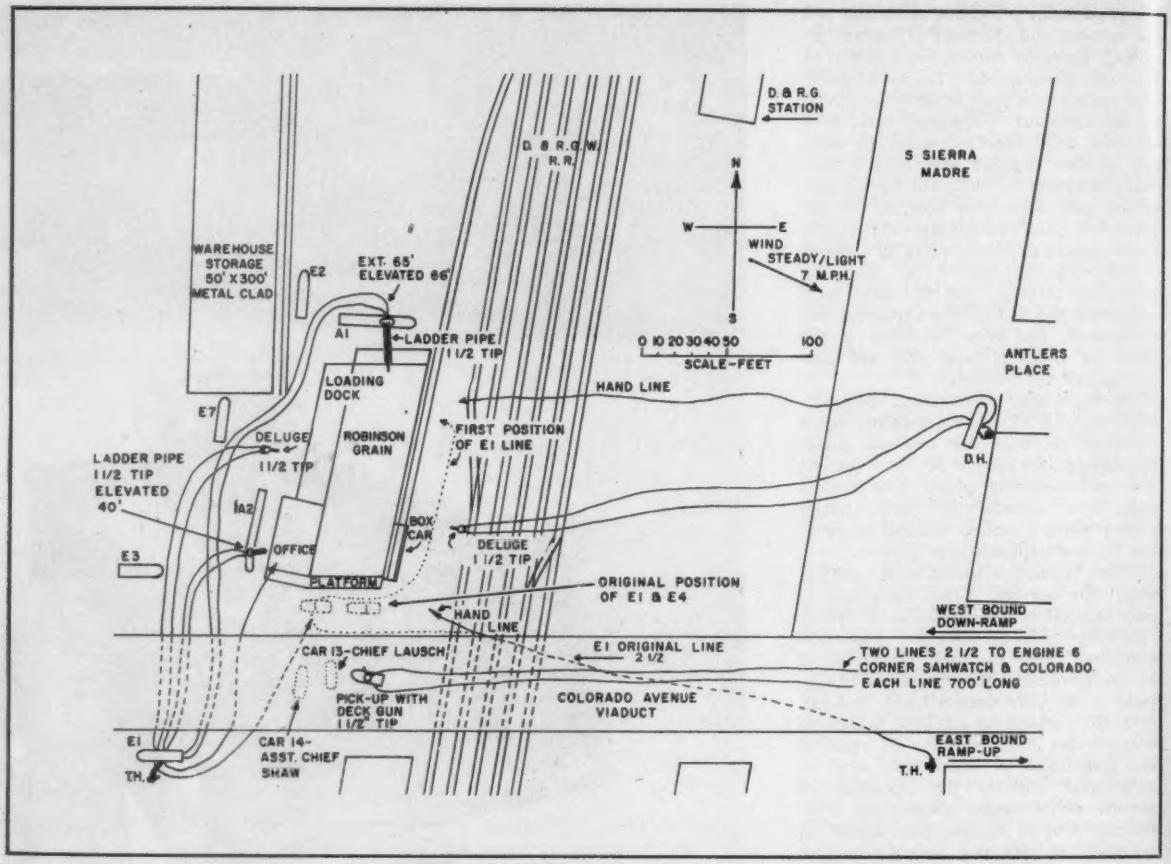


Diagram of fire ground. The viaduct was supported by unprotected steel beams and iron posts posing an unusual exposure hazard

Chronology of a General Alarm Fire

A detailed account of a grain and feed store fire that posed unusual problems for the Colorado Springs Fire Department

By LESTER L. WILLIAMS, M.D.

SHORTLY AFTER 10:30 P.M., on Thursday, December 6, 1956, flames were seen coming out the roof of the Robinson Grain Company at 218 W. Colorado Avenue, Colorado Springs. The call was received at the fire department alarm office at 10:33 p.m., and Engines 1 and 3 and Aerial 1 responded under command of Assistant Chief Les Shaw.

The Robinson Grain Company occupied a brick building with frame interior, three stories high, 140 feet long by 50 feet wide. Contents of the building included grain and feed. An attached addition at the southwest corner housed offices. Thirty feet south of the building, and elevated 20 feet above ground is the West Colorado Avenue viaduct, carrying vehicular traffic over the tracks of the D. & R. G. W. R. R. and Monument Creek. This viaduct is supported by steel beams on iron posts, surfaced with pavement over planking. A short distance northwest of the Robinson Grain building was a metal clad warehouse, 50 by 300 feet, used for storage. The night was clear and cold, with the mercury at 17°; the wind was from the west northwest, steady at seven miles per hour.

Arriving companies noted extensive fire on second and third floor levels in the north end of the building, with flames breaking out of the cupola on the north end of the roof. Engine 1, responding from the Central Station, five blocks east, took the plug at the southeast corner of Sierra Madre and a ramp to the south side of the viaduct, and laid a line across the railroad to the front or south end of the building. The railroad was notified to hold all trains. This line was connected through the pump, a shut-off nozzle attached, and the line carried along the east side of the building to operate through second-story windows near the north end of the building.

Captain Graham of Engine 1, made a brief sortie through an office window into the south end of the first floor from which position he could see and hear extensive fire overhead in the north end

of the building. Smoke conditions, the rapid spread of the fire, and the decrepit condition of the building did not permit an interior attack via this route, so the officer beat a hasty retreat. The crew of Engine 3 saw the light of the fire as they left their station, seven blocks west. They came across the viaduct, then down the ramp on the north side of Colorado Avenue, taking the plug at the corner of Sierra Madre and Antlers Place, and laid a second line to the northeast corner of the building. Attempt was made to open a freight loading door four feet above ground level, but it was too solid and too securely fastened to permit hasty forcible entry; the line, therefore, was operated from the ground and the stream directed through windows in second and third stories.

Second alarm by radio

At 10:36 Chief Shaw transmitted a second alarm by radio, bringing Engine 4 from the Central Station, where it had just arrived on move-up. At this time Chief of Department Fred Lausch arrived at the fire and assumed command. To meet the need for large quantities of water, Engine 1 was disconnected from its original line, the line recoupled and used as a direct hydrant line and the pumper moved across the street to a hydrant on the 16-inch main running beneath the viaduct.

On arrival at the fire, Engine 4 was spotted at the plug originally taken by Engine 3, from which point it supplied water for No. 3's line, plus another line hand carried by Company 4 to the northeast corner of the building. Since water supply was ample, a 1¼-inch tip was used on this latter line.

At 10:40 Chief Lausch ordered Engine 2 to report to the fire. On arrival its crew was directed to lay two 2½-inch lines from Engine 1 to the aerial, which had been spotted at the north end of the building. These lines were siamesed into the ladder pipe, with 1½-inch tip, and the steel ladder run out 60 feet at an angle of 66°, putting the tip about 55 feet above the ground, which is maximum allowable for this setting. A truckman at the tip of the ladder, locked in with life belt, directed this stream upon the cupola on the north end of the roof, through which flames were bursting.

Approximately 15 minutes after the alarm, the cupola collapsed, slid down the east side of the roof and dropped off to the ground. Had the crew of Engine 3 been able to enter the loading door previously noted, the men might have been trapped. A small portion of the east wall fell down with the cupola; it was obvious at this point that the building was doomed. Other master stream appliances were then set up to surround the fire and to protect exposures. To furnish the necessary forces, in rapid succession Engines 7, 6, and 5 were ordered to the fire. A deluge nozzle from the aerial was located on the west side of the building. Two lines from Engine 1 fed this multiversal, the stream being operated (with 1½-inch tip) through second and third story windows on the west side of the building.

At this stage six lines were in operation from Engine 1, coupled by 4½-inch soft suction to a hydrant on a 16-inch main. These were two hand lines, each with 1-inch tip; two lines to the ladder pipe, with 1½-inch tip, elevated 55 feet; and two lines to the deluge with 1½-inch tip. These lines averaged about 300 feet in length. Discharge pressure at the pump was 140 psi, and residual pressure on the compound gauge was 50 psi, indicating that there was still more water available.

The off-shift men who had been recalled to duty, manned the reserve aerial and brought it to the fire at about 11:20 p.m., spotting it at the southwest corner of the building. The big stick was raised and the ladder pipe unlimbered. Two wyes were put on outlets on the right side of Engine 1, and two more lines were laid from this pumper to a siamese at the bottom of the reserve aerial. Three-inch hose led from the siamese to the ladder pipe, at the tip of the bed ladder, approximately 40 feet from the ground. A 1½-inch tip was used.

Eight lines from single pumper

With this layout, Engine 1 supplied water through two lines to the ladder pipe on Aerial 1—similar setup to the reserve aerial; two lines to the deluge on the west side of the building with 1½-inch tip, and two lines of 2½-inch hose to nozzles with 1-inch tip, a total of eight lines of 2½-inch hose from a 1000 gpm class A pumper. All were excellent fire streams.

The residual pressure was still 30 psi, discharge pressure was 130 psi, the engine turned over at 2,050 rpm and without labor. The pump was in capacity. Pump operator John Blunt used the auxiliary cooler almost continuously and refilled the radiator several times, so engine temperature was never above 180° F. The author took the accompanying picture of the pump panel during this operation, showing the two wyes, wide open valves, and the gauge readings. There were two more lines from outlets on the left side of the pumper, and two more from rear outlets, which had been provided as special equipment on this pumper at the specification of Chief Lausch.

Another deluge set was placed on the east side of the building, and supplied by two lines of 2½-inch hose with 1½-inch tip. from Engine 4. One of these was the original line laid by the crew of Engine 4, the other was hand laid by the crew of Engine 7. Because the hydrant to which Engine 4 was spotted had no steamer fitting, that pumper was connected to the plug by two short lengths of 2½-inch hose preconnected to pump

Continued on page 376

Photo by Dr. L. L. Williams

Photo by Earl Marchenke

Left: Pumping from a 16-inch main, Engine 1 supplied six 2½-inch lines and two 3-inch lines. The extra lines were connected by means of wyes on the discharge gates. A deluge nozzle, two ladder pipes and two hand lines were simultaneously operated from these lines. **Right:** Hand line operating on the east side of the building. The remains of the cupola lie directly in front of the firemen

Photos courtesy New York State Bureau of Fire Mobilization and Control

A heavy snowfall added to discomforts of the long pumping operation and salvage cover shelters were improvised to protect crews against the elements. Governor Harriman inspected the emergency operation and praised work of firemen

The source pumper required five lengths of hard suction to reach the water of Thompson's Lake from the hard ground. The total lift was 15 feet. Once started, the delivery of water was continuous until the operation was completed

Emergency Relay Pumping Relieves Community Water Shortage

Efforts of 17 Albany County pumpers in 19,500-foot relay brings relief as near-empty reservoirs threaten Altamont, N.Y.'s welfare

ALTAMONT IS A VILLAGE of 1,200 persons located in the Helderberg Mountains of upper New York State, just west of the City of Albany. On the weekend of November 17, 1956, the water level in the community reservoirs dropped almost to zero, precipitating an emergency that eventually involved the fire service of that area.

Lack of rain, among other things, had caused the reservoirs supplying the village to drop to a dangerously low level and all residents were urged to cut down on their use of water. However, the situation became so critical, with less than a day's supply remaining, that Altomont's Mayor Lloyd S. Briggs appealed to Governor Averell Harriman for assistance. The Governor was attending the Syracuse-Colgate football game in Syracuse, N. Y., when he received Mayor Briggs' appeal. He immediately declared a natural disaster emergency and called for prompt action by Civil Defense to render aid.

Colonel Alfred H. Jacobson, Albany County Civil Defense Director, was alerted and he, in turn, contacted Albany County Fire Coordinator Edward T. Ryan. Although the nearest water supply was three and one-half miles away from the reservoir, it was decided that fire department pumpers could do the job of replenishing it. Accordingly, the Albany County Fire Mutual Aid Plan was activated and Coordinator Ryan started the job of assembling the equipment.

Calls were made to Albany, Watervliet, Selkirk No. 2, Schuyler Heights, Latham, Verdoy, Midway, Fuller Road, Slingerlands, West Albany No. 2, Clarksville, Westmere No. 2, Knox, Voorheesville and Guilderland for a pumper from each department. North Bethlehem was asked to send a tank truck immediately to take care of any situation that might arise prior to the start of the pumping operations. Altamont also supplied a pumper.

In order not to leave any community unprotected, Coordinator Ryan called only departments which had more than one pumper and with 1,000 feet of 2½-inch hose in reserve. He also called only pumpers of 500 gpm and 750 gpm capacity. The first call went in at 4:45 p.m., and the last at 6:11 p.m. The Altamont fire headquarters was selected as the rendezvous point and by 10:30 p.m., the pumpers started locating.

Lake water pumped to reservoir

The source of supply was Thompsons Lake, located directly south of Altamont. In order to reach the Altamont reservoir, it was necessary to stretch 19,500 feet of 2½-inch hose.

Thompsons Lake is approximately 85 feet higher than the reservoir and the hose line was laid alongside the road connecting the two up a 0.945 per cent grade to the highest point on the road and then down grade to the reservoirs.

The source pumper laid out 50 feet of 4½-inch hard suction into the lake with a 15-foot lift. Sixteen pumpers were actually used in the relay, with stretches varying from 1,000 to 2,500 feet. One pumper was used as a "floater" for the purpose of replacing any unit which might have broken down during the oper-

ation. Fortunately, all of the apparatus which were actually used functioned perfectly and it was not necessary to replace any of them.

At approximately 11:30 p.m., November 17, the source pumper started drafting water and at 1:00 a.m., November 18, the relaying alignment was complete and water started flowing into the reservoir.

A single line of 2½-inch hose was used, the source pump operating at 150 psi. The pumping continued until 1:25 p.m., November 18, when it was determined that sufficient water had entered the two reservoirs to ease the crisis. It is estimated that over the 14-hour period, approximately 250,000 gallons of water had been pumped into the reservoirs.

Once the source pumper started pumping, it continued without stopping until the end of the operation. This was also true of almost all of the other pumpers, for it was fortunate that only four hose breaks occurred. In two instances it was necessary to replace the broken lengths, while in the other two cases, the breaks were temporarily repaired by applying hose jackets.

At approximately ten o'clock on Saturday night, snow began to fall and continued heavily all night and into the next morning. By the time it stopped, the Weather Bureau recorded a fall of over five inches, the heaviest on record before Thanksgiving since 1886.

Governor visits scene of operations

On Sunday morning, Governor Harriman made a personal survey of the entire operation, visiting with each pumper crew, talking with them and expressing his gratitude for their splendid spirit of cooperation. At the conclusion, the Governor said, "A remarkable job has been done that proved what a lot of people said couldn't be done, could be," and the firemen had "saved the community from the emergency." The Governor was deeply impressed by the success of the entire operation. Following his tour of inspection, he accepted the invitation of the firemen to have dinner with them at the Altamont Fire House. The main course was stew, and he enjoyed it immensely.

The entire operation was a fine example of team work and cooperation. With the exception of the four burst lengths, there was no break in the continuous flow of water from the time the source pumper started pumping until all of the pumps shut down at the end of the operation.

The three and one-half mile relay may have been the longest on record. If it wasn't the longest, it is certain it was one of the smoothest and best executed.

The operation was discontinued when it was estimated that enough water had been pumped into the reservoir to offset any emergency until more permanent relief could be obtained.

Civil Defense pipeline established

Further relief came the next day, Monday, in the form of 800 20-foot sections of 8-inch pipe, and four 1,500 gpm pumps from Civil Defense stockpiles. Here, again, the volunteer firemen jumped into the breech and assisted the Public Works Department in laying the temporary pipeline from Thompsons Lake to the reservoirs. By 2:50 p.m., Wednesday, November 21, the temporary pipeline was operating. It was estimated it would take two weeks to fill the reservoirs and relieve the shortage for the winter.

During the operation, gasoline and oil were supplied the pumpers by the Village of Altamont which hired a 1,000-gallon tank truck for the purpose.

Route followed by the emergency relay was along roads and highways as far as practicable. The Civil Defense pipeline was later laid over the same ground

A total of 257 firemen responded and participated in the relay as follows:

Albany—7
Watervliet—7
Selkirk No. 2—12
Schuyler Heights—16
Latham—9
Verdoy—15
Midway—24
Fuller Road—18
Slingerlands—18
West Albany No. 2—18
Elsmere—10
Clarksville—16
Westmere No. 2—10
Knox—10
Voorheesville—10
Guilderland—16
North Bethlehem—8
Altamont—33

All were volunteer companies except those from Albany and Watervliet.

Auxiliary units assist

During the relay, the Altamont ambulance was used to transport pumper crews between the various points of operation. The Guilderland Volunteer Fire Police went on duty at the intersection of Routes 20 and 146 on the afternoon of November 17th at 5:43 p.m. for the purpose of directing the responding pumpers to the correct route. The officers remained on duty until 7:40 p.m. when the last pumper had passed through the intersection.

Throughout the operation hot coffee and sandwiches were served the firemen by the Ladies Auxiliaries of the Altamont, Guilderland, Guilderland Center, North Bethlehem and Westmere Fire Departments. The Red Cross also participated in this effort to supply the working firemen.

Typical of the spirit of unselfishness which permeated the entire operation was a neighborhood farmer who worked throughout the night supplying the pumper crews with wood for fires to ward off the cold of the winter night. To date no one has been able to ascertain his identity. □□

From a report from Charles M. Fales, Chief, Bureau of Fire, New York State Division of Safety.

Phoenix Firemen Hurt by Hose

Two members of the Phoenix, Ariz., Fire Department, Frank Porter, fire equipment inspector, and Ralph Titel, fire equipment mechanic, were injured on January 15 when a charged hose line went wild.

The 3-inch hose broke loose from a testing standard at the department's drill tower at Sixth and Madison in Phoenix and flailed around, striking Porter and knocking him against a fence, breaking his arm. Titel strove to shut down the pumper but was knocked down by the whipping hose, suffering a cracked leg bone. However, he managed to shut off the pressure.

By ROI B. WOOLLEY

PART XXIII

SALVAGE CASE HISTORIES

PREVIOUS CASE HISTORIES have described salvage operations of considerable magnitude, dealing with commercial, industrial and public occupancies.

The following examples are more typical of the type of occupancies which are likely to be encountered by the average municipal fire department, professional or volunteer, and whether salvage work is carried out by separate Underwriters' salvage forces, fire department salvage squads or by regular fire fighters detailed for special salvage tasks.

Greenwich volunteers do salvage

The Town of Greenwich, Fairfield County, Conn., one of the "bedroom" suburban communities of metropolitan New York, boasts one of the wealthiest areas in the United States. It comprises a number of villages, each of which contains mansions that are assessed into the hundreds of thousands of dollars. It is not unusual for the contents of a single room in some of these show places to be insured for an amount equal to the cost of a modern ranch-type residence. Thus fire need not necessarily be of serious proportions in such costly estate to cause heavy property damage, particularly where fire fighting and salvage strategy are lacking.

It can be readily seen that such conditions present unusual opportunities for efficient salvage; opportunities which the Town of Greenwich Fire Department has been quick to capitalize, both from the viewpoint of holding fire and attendant water and smoke damages to the minimum as well as from the standpoint of creating favorable public relations between townsfolk and fire department.

Actually, the Town of Greenwich Fire Department, of which Chief Stuart Potter is head and Henry P. Crawford is assistant, comprises seven individual fire departments, each more or less a separate autonomy, but operating under the direction of the paid chiefs and volunteer deputy chiefs. Each is composed of volunteers with a cadre of paid personnel. Town fire headquarters is at Greenwich. The other firehouses are located at Cos Cob, Byram, Old Greenwich, Glenville, Round Hill and Banksville. The latter department, incidentally, is directly on the New York-Connecticut line and is incorporated in both states and serves in both Westchester County, N. Y., and Fairfield County, Conn.

In a report to FIRE ENGINEERING, Chief Potter has this to say: "We in the Greenwich Fire Department have been very salvage-conscious for a number of years. Many groups from this department, particularly members of the fire patrol companies, have attended sessions of the training school of the New York Fire Patrol.

"Salvage has been one of the important topics treated in local fire training schools. The lecturers have been drawn from several sources, but in the interests of standardization, we have consistently followed the practices laid down in the training courses of the New York City Fire Patrol."

"We have a fire patrol truck in each district, six in all, with one more coming. Each unit is well equipped for both first aid and salvage work. Among the important items carried are: Salvage covers, smoke ejectors and circulators, electric generators, floodlights, portable pumps—both electric and gasoline; roofing paper; augers; ladders; pikepoles; axes; resuscitators and inhalators; self-contained breathing apparatus; filter-type masks; rope and chains; hose bridges; stretchers and blankets. One truck is equipped with a 10-ton winch, protective clothing for the personnel and many miscellaneous items too numerous to mention."

One replacement truck is on order and another unit is to be replaced shortly, the funds already having been allocated. One organization, that of Round Hill, has a patrol company but is presently not equipped with salvage apparatus.

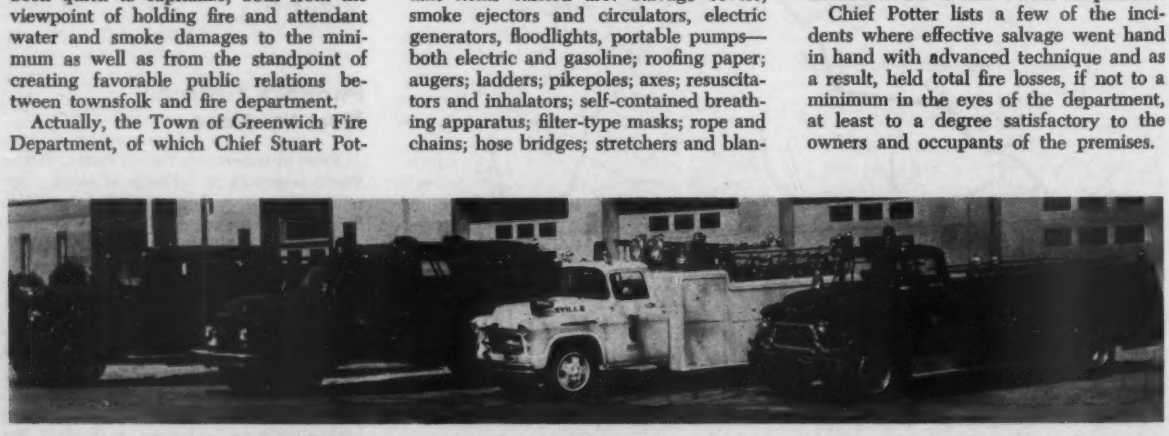
Chief Potter points out that the salvage operations are performed by separate squads whose sole duty is salvage. Each company has a captain, two lieutenants and averages about 25 men, all volunteers.

An important factor in successful salvage, Chief Potter emphasizes, is the cooperation between fire fighting and salvage units. In combatting fires in the type of costly residences typical of the area, the efficiency of the salvage work, and the damage to property and contents, is determined by the methods employed in attacking the fire—the procedures of forcible entry, ventilation, extinguishment and overhauling. The more efficiently these phases of fire suppression are conducted, the more successful the salvage operations.

Minimum use of water

Therefore, in the extinguishing operations particularly, every effort is made to minimize the application of water, through the use of small lines and fog nozzles wherever and whenever possible.

Chief Potter lists a few of the incidents where effective salvage went hand in hand with advanced technique and as a result, held total fire losses, if not to a minimum in the eyes of the department, at least to a degree satisfactory to the owners and occupants of the premises.



The Greenwich, Conn., Fire Department operates six salvage companies, all with volunteers. The four modern units shown here and two smaller vehicles which are to be replaced are equipped with the necessary salvage tools; the salvage practices of metropolitan Underwriters' patrols are followed as closely as possible

Situation facing the Greenwich firemen at the Metz residence, Taconic Road, January 25. Two 2½-inch lines and a 1½-inch line were required to extinguish the fire. Although furniture on the third floor and roof structure required replacement, all furnishings on the second floor were saved. First-floor furnishings were safely removed to the garage shown. Due to the efforts of the salvage squad, water damage was negligible

CASE HISTORY NO. 4

SUBJECT OF STUDY

Large Residence
10 Field Point Circle
Greenwich, Conn.

DATE:
April 30, 1952

A SERIOUS FIRE in the home of James R. Sheldon, 10 Field Point Circle, Greenwich, on April 30, 1952, threatened the entire large three-story structure.

Upon arrival of the department, the roof area was so involved that two 2½-inch hose lines were required to subdue the blaze. These lines were reduced to 1½-inch at the earliest possible moment, all overhauling being accomplished by means of small lines, using fog.

The building was valued at $128,000. Damage to the structure was $15,000 and to the contents, $3,000. The latter alone were insured for $100,000.

While fire fighters tackled the roof fire, salvagemen worked inside. Most of the furnishings on the third floor were removed to a safe location before the ceilings were pulled to get at the roof blaze. All furnishings on the first and second floors of the wing involved were properly gathered, stacked and protected by salvage covers. A chute was rigged on the second floor to direct excess water out through a window. Auger holes were then bored in the third floor so that practically all of the water was directed into the chutes and conveyed outside the building. Only a trifle of water seeped to the second floor and none reached the first level.

These major salvage operations were supplemented by numerous other routines such as removal of costly pictures, drapes, etc., to safe places, careful opening of windows (instead of breaking them out), protection of stairs and other areas vulnerable to water runoff, etc.

This fire brought special commendation from the General Adjustment Bureau Inc., which pointed out that the blaze had gained considerable headway before the department was notified, and only the prompt and efficient action on the part of the department extinguished the blaze with a minimum of further damage.

Training important

Further testimony to the value of trained, well-equipped salvage patrol units is given by Chief Potter in the record of many other fires in dwellings. Lack of space prevents including the details of the salvage work in this chapter. These include a fire on Byram Shore Road, April 1, 1952, which was also a roof blaze and which required two 2½-inch and two 1½-inch hose lines to subdue it. This building was valued at $90,000 and contents at $25,000. Damage to the structure reached $37,000, and to contents, $10,000; also a blaze in the Metz home (pictured above) and one involving the Homelite plant on Riverdale Avenue which was of sufficient magnitude to open several sprinkler heads. Salvage work of the first order was required to protect the high-valued machinery and other equipment in this plant.

In another instance, a fire completely involved the two upper floors of a three-story frame mercantile and apartment building housing a tavern on the ground floor. Four 2½-inch lines were needed to extinguish this blaze. However, two hours after the department received the alarm, the tavern was permitted to open for business because of effective salvage work.

CASE HISTORY NO. 5

SUBJECT OF STUDY

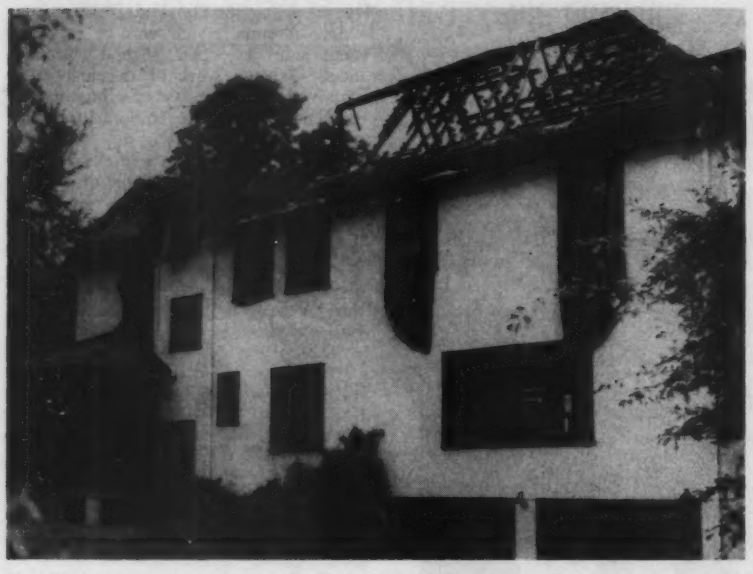
Dwelling, two-story and attic
Cincinnati, Ohio

DATE:
June 1, 1953

AT 7:53 P.M. on June 1, 1953, a box alarm called the Cincinnati, Ohio, Fire Department and the Underwriters' Salvage Corps to the residence of G. L. Nord, 2980 Observatory Avenue.

The initial assignment of three pumpers and ladder truck of the fire department, and Patrol 1 of the Undewriters' Corps, was faced with a serious fire which, like those noted in the Town of Greenwich above, were of such intensity and so located with relation to the structure involved, that control and extinguishment necessitated the use of water in such volume as to seriously threaten the entire contents of the two-and-a-

Chutes located below openings in ceilings of second floor of Nord residence which carried run-off out windows as shown in accompanying picture
—Underwriters' Salvage Corps photo



Fire destroyed roof of residence of G. L. Nord, Cincinnati, but efficient salvage protected contents of building against water damage incident to extinguishing fire, and the elements. Unable to cover roof, tarpaulins were laid to form "roof" over second floor and runoff was chuted out second-story windows, as shown. Note that not a window was broken

—Underwriters' Salvage Corps photo

half-story stucco, wood-roofed structure. The cause was attributed to sparks from an incinerator.

Immediately upon arrival, the officer in charge of Salvage Patrol 1 radioed for Company 2. Salvage operations started on the second floor, where working directly under the fire, salvagemen moved furniture to a favorable spot. Rugs were picked up, rolled and with the contents of all cupboards, placed on the furniture which was then covered with tarpaulins. The floors, stairs and hall were also covered, and this same procedure was followed on the first floor.

Water chutes were improvised on the second floor to dispose of water runoff from above to the outside of the building (see photographs).

The operations entailed the use of 37 salvage covers. Most of this work was performed under artificial lighting; a generator and floodlights were in use for four hours.

This was only one phase of the salvage operation—the interior action. Commenting on the incident, Chris Williams, business manager of the Salvage Corps, said, "If we had stopped our efforts at this juncture and considered it a job well done, it would have been wishful thinking on our part. The entire top part of the building was left exposed to the elements and should a heavy rain occur, all our efforts would have been in vain. Therefore, we set about providing further and final protection for the exposed parts of the structure. To do this, we placed 15 roof covers (shown in photograph) above the attic floor, some forming chutes to drain the water to the outside.

A lieutenant was in charge of Salvage Company 1 and a captain directed Company 2, the entire operation being commanded by the assistant chief of the corps.

In this incident, much of the success of the operation came from effective chuting of the water, draining it through predetermined places in the ceilings of the two floors to the outside. The floors of course, were bagged where necessary. It is interesting to note that no windows were broken and only the minimum damage done by the fire fighters of the department, and salvagemen, in the cycle of extinguishment-overhaul-salvage. □□

U. S. Navy Introduces Two New Extinguishing Agents

The Bureau of Aeronautics, U. S. Navy, has developed two new extinguishing agents for use in fighting fires that occur in crashed or grounded aircraft. Both of the new products will be supplied for the first time as part of the Navy's new Type MB-5 crash fire and rescue truck. The new truck is scheduled for delivery to Naval Air Activities beginning in February, 1957.

TMB for magnesium fires

The first of the new agents is trimethoxyborozine (TMB) designed for use on magnesium fires. The second is foam compatible dry chemical (FCDC) for use on spill fires where mechanical foam is also employed.

TMB is an unusual extinguishing agent in that it is itself a flammable liquid. It has a flash point of 55 degrees F and burns quietly with a low, green flame. When applied to burning magnesium it may flare up and give off a white smoke. It must be stored at temperatures above 32 degrees F., as its viscosity increases very rapidly at low temperatures. Because of these and other technical factors, it requires exacting techniques in handling and application.

When TMB hits hot magnesium it will seethe and froth, quickly taking on the look of a molten, glassy scum over the whole burning surface. By this action the magnesium mass, both solid and molten, is sealed off from oxygen in the air, preventing further combustion. The operator of the extinguisher builds up this coating over the exposed, burning magnesium.

The new compound reacts with water or moisture in the air, forming a white precipitate of boric acid. Methyl alcohol, denatured ethyl alcohol and hot water are good solvents for use in cleaning up TMB and the boric acid precipitate.

No known toxic products are produced when the TMB is used but the white smoke given off when applied to a fire should not be breathed unnecessarily; upwind approach to the fire is recommended.

TMB on the skin should be wiped off dry with a rag before washing with water. This will avoid the heat generated when the two compounds react. Care should be taken not to direct a TMB stream toward the faces of other personnel.

The new extinguishing agent will be supplied in a pressurized 2½-gallon unit. It will be identified by a 6-inch band of orange fluorescent paint around the top of the extinguisher with TMB painted on the strip in 1-inch black letters. Each of the new crash trucks will carry two of these units.

Foam Compatible dry chemicals

Common dry chemical extinguishers cannot be used successfully in conjunction with foam for spill fires of flammable liquids. Previous dry chemicals caused a rapid breakdown and collapse of the foam blanket, thus nullifying the desired fire extinguishing qualities.

To overcome this undesirable action, the Navy has developed a compatible dry chemical. The new agent reportedly has no effect on foam. The product is distinguished by its light green color and can be used in standard extinguishers.

The extinguishers containing the compatible dry chemical will be designated by a green painted cap on the top curve of the ordinary red extinguisher body. The new agent is approved for the various sizes of extinguishers ranging from 20 to 300 pounds, presently used by the Navy.

Memphis Improves Water Tower As Striking Arm

IN ITS OCTOBER 1956 ISSUE, FIRE ENGINEERING published an article by Clarence E. Meek, Honorary Battalion Chief, New York Fire Department, captioned "The Rise and Decline of the Water Tower." In it, the author asked the question: "Is another famous fire fighting facility to pass into history?" He pointed out that the "roaring twenties" saw the construction of the last apparatus of the conventional water tower design.

It may be a fact, as Honorary Chief Meek wrote, that the water tower, as the fire service has known it through the years, has had its day. But at least one fire department in the nation—the Memphis Fire Department—has gone the old water tower one better. Contrary to placing its tower in moth balls, Fire Chief John C. Klinck and his active Fire-Police Commissioner Claude Armour, aided and abetted by the fire department's enterprising shopmen, have given their old apparatus a new look and new power potential as a fire fighting facility.

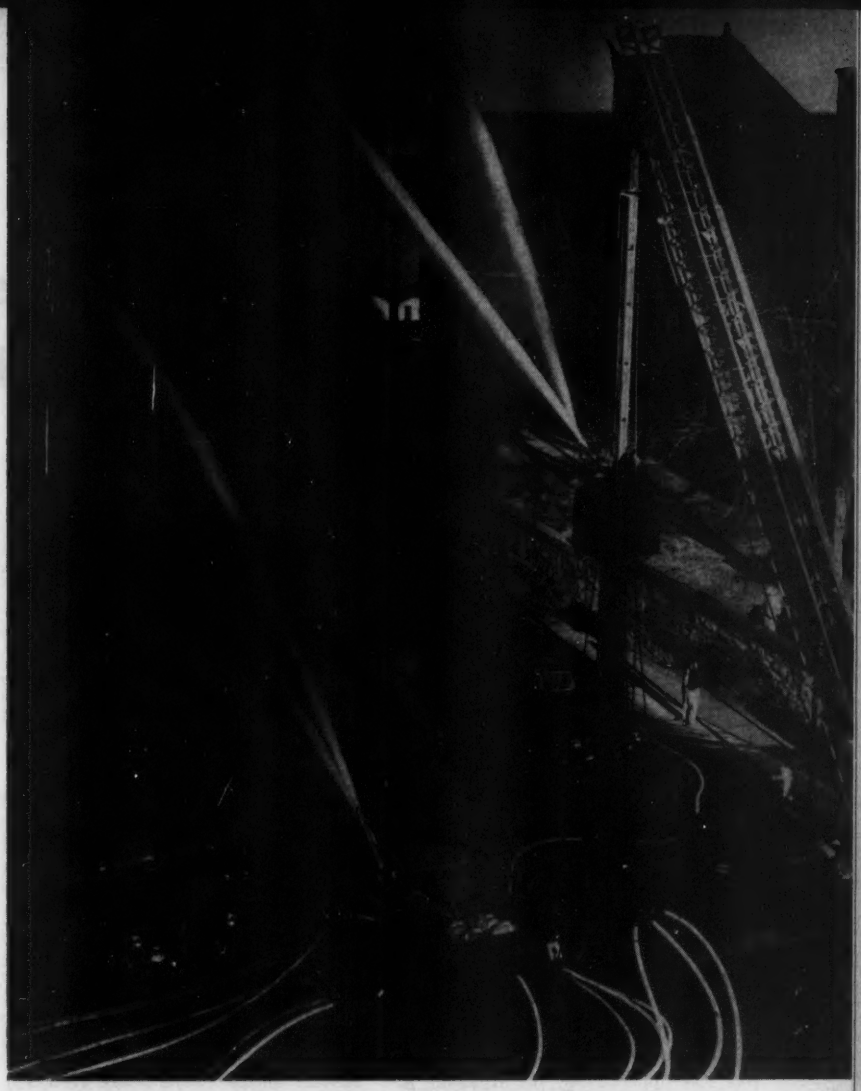
Memphis bought its one and only water tower back in 1898. In 1918 it was tractorized and a crow's nest added, capable of holding four men. It had connections for 22 hose lines and was the center of much attention during its period at fire headquarters. Incidentally, it is said that the Chicago and Memphis towers are the only ones fitted with such a crow's nest.

As readers of this Journal know, the Memphis Fire Department is always experimenting with improvements in fire apparatus and equipment. Much of this development has been in the field of "heavy duty" fire fighting facilities (its new "Multi-Master" is pictured in the story of the FDIC fog tests in a previous issue). It was natural that Chief Klinck and his aides would re-evaluate the department's famous old unit in the light of these developments.

For more than a year, Chief Klinck and Commissioner Armour have labored with engineers and technical personnel recreating or rehabilitating the old device. Now they have what they believe is the only one of its kind extant.

A full-scale test of the unit was made early Sunday, February 17, on the Memphis waterfront.

With more than a half dozen of the department's modern pumpers (Memphis frowns on anything less than 1,000 gpm) feeding the apparatus, the tower's five nozzles at one point were delivering 7,247 gpm.



Reborn Memphis water tower gets workout. "Guns" at masthead, crow's nest and deck deliver over 7,000 gpm fed by 22 supply lines from six pumpers. Note aerial ladder used to take pitot readings, and department's "Multi-Master" unit at lower left

In a later test, water was being pumped directly from Wolf River and the streams played back to the river. In this test, the streams almost reached Mud Island. "It's the biggest test we have ever held in the city, and the tower comes up to our expectations," said Chief Klinck.

Outwardly, the unit resembles the old tower in most respects. The changes have been refinements to increase the striking power and facilitate operation rather than in design. The steel superstructure and the steel tower or mast, which telescopes into it outwardly show little change. The reach of the tower with mast extended is 60 feet. Three lines can be fed into the mast nozzle through a 4-inch pipe at the rate of between 1,000 and 1,200 gpm.

Raising and lowering the tower itself is by push-button, as is the complete operation of all nozzles or deck guns. This is one of the most noticeable improvements. Half way down the tower, or at the end of the superstructure, is the crow's nest with two additional nozzles. Three lines can be shunted into each nozzle, producing from 1,500 to 1,800 gpm.

At the base of the tower on the platform, or deck, are two more mounted guns. One can deliver 3,000 gpm while the other can discharge 1,500 to 1,800 gpm. All nozzles are fed through separate pipes.

The tower is mounted on a tractor-trailer; steering is facilitated by a rear tiller wheel.

The unit will be kept in active service, according to Chief Klinck, and will respond to boxes in the high hazard area and upon special call. In his words, "It gives the department a piece of equipment capable of delivering under pressure, between 8,000 and 10,000 gpm on a fire that's out of control."

The editors are indebted to Chief John C. Klinck, Memphis Fire Department and Richard J. Allen of the "Memphis Commercial Appeal" for data and photographs upon which this account is based.

How would Dearborn's (proposed) integrated police-fire force have coped with

Explosion and Fire in Ford's Rouge Plant Which Killed One-Injured Twenty-Five

AT 6:40 P.M., Monday, March 18, an explosion occurred in the auto frame painting and drying oven of the giant Rouge plant of the Ford Motor Company at Dearborn, Mich.

The frame and cold heading building, where the blast occurred, is a three-story structure, 1,100 feet long and 225 feet wide. It is located in the southwest portion of the plant near Gate 11 and Schaefer and Butler Roads. Frame painting and drying is carried on in an enclosed structure 800 feet long by 80 feet wide inside the main building and near its Northwest corner.

The car frames are unloaded from flat cars at the entrance to the structure, hung on a conveyor belt, and carried through the paint spray tank and drying oven. The finished frames are then removed from the belt and loaded on flat cars only a short distance from where the operation starts.

The blast blew out most of the windows and parts of the brick wall along a 500-foot section of the west side of the building. Half of the paint drying oven's roof was ripped off by the explosion. A freight car was lifted straight into the air and dropped back on the tracks.

Workers in the area were sprayed with flaming paint as a giant sheet of flame roared from the drying oven door "like the exhaust of a jet airplane" as one witness described it.

Along this section of the plant was a three-foot-high loading dock busy with workmen. Near the entrance to the spray booth is a 20-foot-high inspection platform where a dozen more men were working.

The flames engulfed the helpless men, setting their clothes and hair on fire. One man working on top of a six-foot scaffold was blown 50 feet through the air. Another was trapped on an inspection platform and jumped 20 feet to the ground. He broke his right heel and sustained burns on both hands.

The plant fire department responded with three trucks and 14 firemen. Plant Fire Chief Raymond Dake called for three Dearborn companies as a safety measure. The chief said most of the property damage was caused by the explosion as the fire died down quickly after the initial blast. The firemen extinguished flames that had escaped the automatic CO_2 system and sprinklers. They then assisted in the rescue work. One plant fireman collapsed from smoke inhalation. He was treated at the Ford Hospital and released. The Dearborn Fire Department and the Detroit Police Department each sent four ambulances to assist the nine private ambulances at the scene. The 17 ambulances rushed the victims to Ford Hospital and Wayne County General Hospital. Ford Hospital had activated it's Civil Defense Medical Emergency Disaster Plan and 18 doctors and 22 medical attendants were at the scene. The blast burned six persons critically. One of the victims died; 20 others were injured, 15 requiring hospitalization.

The injured were among 100 men who were busy loading or unloading frames at the time of the explosion; 1700 men were working in other parts of the building. These employees were evacuated, as well as those in the neighboring Manufacturing Services building. Plant fire and safety officials immediately began an investigation into the cause of the explosion. Gunnar Berglund, fire control director, said the safety controls of the gas lines which provide fuel to the drying ovens will be dismantled in an effort to find if one was faulty. He also said the ventilating system will be checked. Berglund said the area was well ventilated and equipped with modern safety devices.

Paint fumes probable cause

Joseph E. Patten, supervisor of plant protection, said the blast might have been caused by ignition of an accumulation of paint fumes despite the ventilation fans that operate continuously. He said the west wall was designed to give way in case of an explosion to minimize damage to the building and the 30-foot-high ceiling of the drying booth was equipped with explosion relief panels.

The opinion of some workers was that a "hot" frame that had just been welded might have been sent into the spray booth and ignited the paint.

Others thought an electric motor might have shorted inside the booth and sparked the fumes into flame. Another theory held by some workers was that a drain tank inside the spray booth may have been hot enough to explode.

All operations in the plant except at the paint drying oven returned to normal when the midnight shift reported. By noon of the next day the plant output was nearly normal and the frame line was producing 350 unpainted frames per hour. Normal production is said to be 400 to 450 per hour. Until full repairs are made to the painting and drying section the frames will be painted at the various assembly plants. □□

Explosion in paint spray booth and drying oven of giant River Rouge plant of Ford Motor Co. caused this damage to 500-foot section of wall. Cause of the blast has not been disclosed

New Orleans Prepares for IAFC Conference

In anticipation of an outstanding attendance at the 84th Annual Conference of the International Association of Fire Chiefs, the New Orleans Fire Department under Chief Howard L. Dey, has gotten off to a flying start with preparatory plans for the convenience, entertainment and education of those who expect to attend the sessions, September 9 through 12, 1957.

A big problem will be hotel accommodations. Although the city has six excellent hotels (Roosevelt, conference hotel; Jung, Monteleone, St. Charles, New Orleans and DeSoto, with prices ranging from $5.50 to $12 single), capable of handling the expected attendance, the allocations of rooms to IAFC registrants must of necessity be based upon priority of receipt of requests by the Housing Committee, of which District Chief Edward Miller is chairman. Reservations indicating details of accommodations and price desired therefore, should be made early and directly to Chief Miller whose address is 317 Decatur Street, New Orleans, La.

Members of the IAFC have been sent registration forms; non-members who may desire to attend may secure this form upon request, from Chief Miller.

Manufacturers of equipment and apparatus who may desire particulars concerning exhibit space should contact Chief L. C. Canning, 295 East 2nd Avenue, Midvale, Utah, chairman, IAFC Exhibit Committee.

Houston CD Volunteer Fire Department

The Houston Civil Defense Volunteer Fire Department is a division of the Civil Defense organization of that Texas city. It was formed in 1950 to reinforce the regular department and to assist firemen during a serious emergency. It is under the command of Chief Dave Laufman.

The men are trained at the fire stations nearest their homes by members of the paid force of the regular department. Protective clothing and insurance are provided by the City of Houston and the men attend weekly drills and respond to fires in order to obtain "on the job training."

Under the Civil Defense plan the city is divided into three areas, each area under the supervision of a volunteer deputy. The area deputy is notified by the fire alarm operator of any multiple alarm in his area. The deputy then starts a telephone fan-out and the volunteers respond to assist the paid men and gain experience. Individual members may also respond to first alarm fires in their district without being called by a superior.

The CD volunteers assist the regular department in many other ways. The recent Muscular Dystrophy and March of Dimes campaigns are examples. During the 1957 Houston Rodeo and Fat Stock Show, Chief J. W. Lobue of the Houston Fire Department was faced with the largest crowd ever to attend the annual event. In order to properly man the show grounds and at the same time maintain the normal protection for the city, Chief Lobue called on the volunteers to augment his regulars. An average of 20 men patrolled the grounds at each performance in company with the paid men. Walkie-talkies connected each patrol to a booster truck and a pumper stationed on the rodeo grounds.

During the year 1956, a total of 223 men received training. Of this number 145 are listed as active members. The paid personnel supervised 4,045 man-hours of instruction and the volunteers spent an additional 17,675 man-hours in the fire stations. Actual fire fighting with the regular force amounted to 1,380 hours.

The most recent general turnout of volunteer firemen was to assist in fighting the St. Joe Paper Stock Company fire in January 1957, the Champion Paper Company explosion in February, and a four-alarm apartment house fire on March 1.

Three Chicago Fire Fighters Killed, Two of Them Officers

Three firemen, including an acting division marshal and a captain, were killed and two others injured, one critically, in the sudden collapse of two brick walls of a burning food-processing plant in Chicago's stockyard district on March 1.

The victims were Howard Strohacker, 48, chief of the 29th Battalion, acting as fire marshal of the 4th Division; George Donovan, 41, captain, Engine 29 and Sylvester Pietrowski, 37, of Engine 50. Worst injured was Edward Hoyt, 42, assigned to Ladder 18. Also injured was Thomas McCauley, chauffeur to Chief Strohacker.

Tragedy struck quickly when without warning except for a muffled puff, two walls of the rear half of the one- and two-story brick plant of the Lawrence Corporation, 527 West 41st Street, crashed outward.

Acting Marshal Strohacker and Captain Donovan reportedly were planning the removal of all fire fighters from the immediate area, fearing a collapse when wooden sections of the interior were found burned through. Fireman Hoyt was atop a ground ladder leading to the second floor when the wall fell. He slid the ladder but was caught by flying bricks.

The fire, for which two alarms were sounded, apparently started in a boiler room and crept upward through wall interstices to an empty storage room where the explosion apparently occurred. Fire Commissioner Robert Quinn said the muffled blast was doubtless caused by an accumulation of gases.

Chief Strohacker was buried under the west wall and Captain Donovan and Fireman Pietrowski were caught under the south wall. Fellow fire fighters and volunteers worked frantically to extricate the men. Captain Donovan was alive when dug out, but died en route to the hospital.

The cause of the fire was not immediately ascertained. Word of the tragedy brought Chief Fire Marshal Albert Petersen and other fire and civic officials to the scene, and to the hospital, where the victims were taken.

At the height of the fire "about 5,000 persons were milling around" the fire ground where rumors of a much greater disaster were rife. Property loss was reported as $15,000.

Three Chicago firemen were killed, one critically injured, by falling walls at 2-11 fire in a food-processing plant on March 1. One fireman was trapped at location (1); two at (3); fireman was knocked from ladder at (2)

Engine 81 of the Los Angeles Fire Department amid wreckage from Douglas DC-7 which crashed on grounds of Pacoima Junior High School. Shrapnel bits of wreckage injured and maimed 78 children

L. A. Firemen Render Effective First Aid at Crash

Los Angeles City Fire Department crews played important roles January 31 in the terrifying minutes after a DC-7 transport plane and an F-89 Scorpion jet fighter crashed in mid-air over the Pacoima District of the San Fernando Valley.

Three schoolboys and five crewmen, including the pilot of the jet, died in the crash, and 78 other children were injured, many of them severely.

The two planes, both on routine checkout flights, collided and then the huge Douglas airplane exploded, the main part of the craft crashing on the grounds of Pacoima Junior High School. Red hot pieces of metal scattered over a wide area. Many of the shrapnel-like pieces mowed down youngsters at play at the school.

The Van Nuys Signal Office of the L.A.F.D. received the call at 11:20 a.m. and dispatched Engines 81 and 75, Ladder 39, and Rescue Trucks 39, 60 and 72—the entire rescue complement of the San Fernando Valley's Division IV. Rescue 59 from West Los Angeles moved to Rescue 39's quarters in Van Nuys.

Chief Engineer William Miller, Headquarters Deputy Don T. Hibbard, Deputy Chief Marvin Meador and Division IV Commander Leonard Eggleston all responded.

The fire itself was quickly controlled, Engine 81 reporting no additional fire equipment needed. But firemen played vital roles in administering first aid to the injured youngsters and in carrying them to the fleet of 30 ambulances which rushed them to half a dozen hospitals. The basic first aid training of the firemen enabled them to do a superior job in aiding the injured children.

Meanwhile, at 11:23 a.m., the jet crashed to earth at 8811 La Tuna Canyon Road in the Verdugo Hills, several miles north and east of the school. This same canyon was the site of the bad brush fire in November 1955.

Fearful that, although the hills were damp from recent rains, the blaze might spread to more homes in the area as well as the brush, Engines 77, 66, 39, 76 and 87 under Battalion Chief Charles Rossie were dispatched to the rough canyon terrain.

The pilot's body was recovered from the wreckage; the radar operator parachuted to safety and landed in nearby Burbank.

Engine companies quickly controlled the small fire.

Patrol 74 of the L. A. County Fire Dept. also responded inasmuch as watershed terrain was involved.

—Cliff Dektar

Hogs Phone—House Burns

Just to prove that this sort of thing happens more often than most folks imagine—and is not confined to any geographical location—we submit for the record this item from Duluth, Minn.

A rural family of seven was homeless on March 5 last, because a neighbor refused to give up the party telephone line so the mother could call the fire department.

Flames broke out March 4 in the Edward Shatto home. Mrs. Shatto said she tried to call the fire department but neighbors on the line refused to give it up.

Firemen arrived too late to save the two-story dwelling. They said if they had been notified a few minutes earlier the house probably would have been saved.

50 Make NYFD Deputy List

The new list for promotion to deputy chief of the New York Fire Department was established March 13 last by the New York City Civil Service Commission.

The complete list includes 50 eligibles. Top man is C. McKeogh with rating of 90.150. The salary of a deputy chief is $9,750.

San Jose Firemen Hold Annual Rodeo

Blue jeans and ten gallon hats are uniform of the day during San Joe Rodeo Week. By permission of the City Manager, A. P. Hamann, members of the fire department wear colorful western dress in order to publicize rodeo for benefit of Widows' and Orphans' Association. Left to right: Firemen J. Lennon, E. Cottle and B. Lowe; Captain S. Seibert; Fireman R. Silva; Captain B. Rebhan; Fireman E. Silva

The San Jose, Cal. Firemen's Association began sponsoring a rodeo in 1955 as a replacement for their annual ball. Proceeds from the show are used to support the local Widow and Orphan Fund.

The event is officially approved by the Rodeo Cowboys' Association and is a professional show in all respects. It is held in the Santa Clara County Fairgrounds, one of the most beautiful and modern arenas in the far west.

All committee and promotion work is done by the members of the local department and each year the show has been successful. In 1956 over 12,000 people witnessed the event.

History of the area records the first rodeo was held in San Joe in the 1770's, a fact which firemen capitalized in promoting the return of the riding and roping show. The third annual rodeo will be held on May 25th and 26th.

What's the difference between EUREKA Multiple-Woven and plain "circular-woven"?

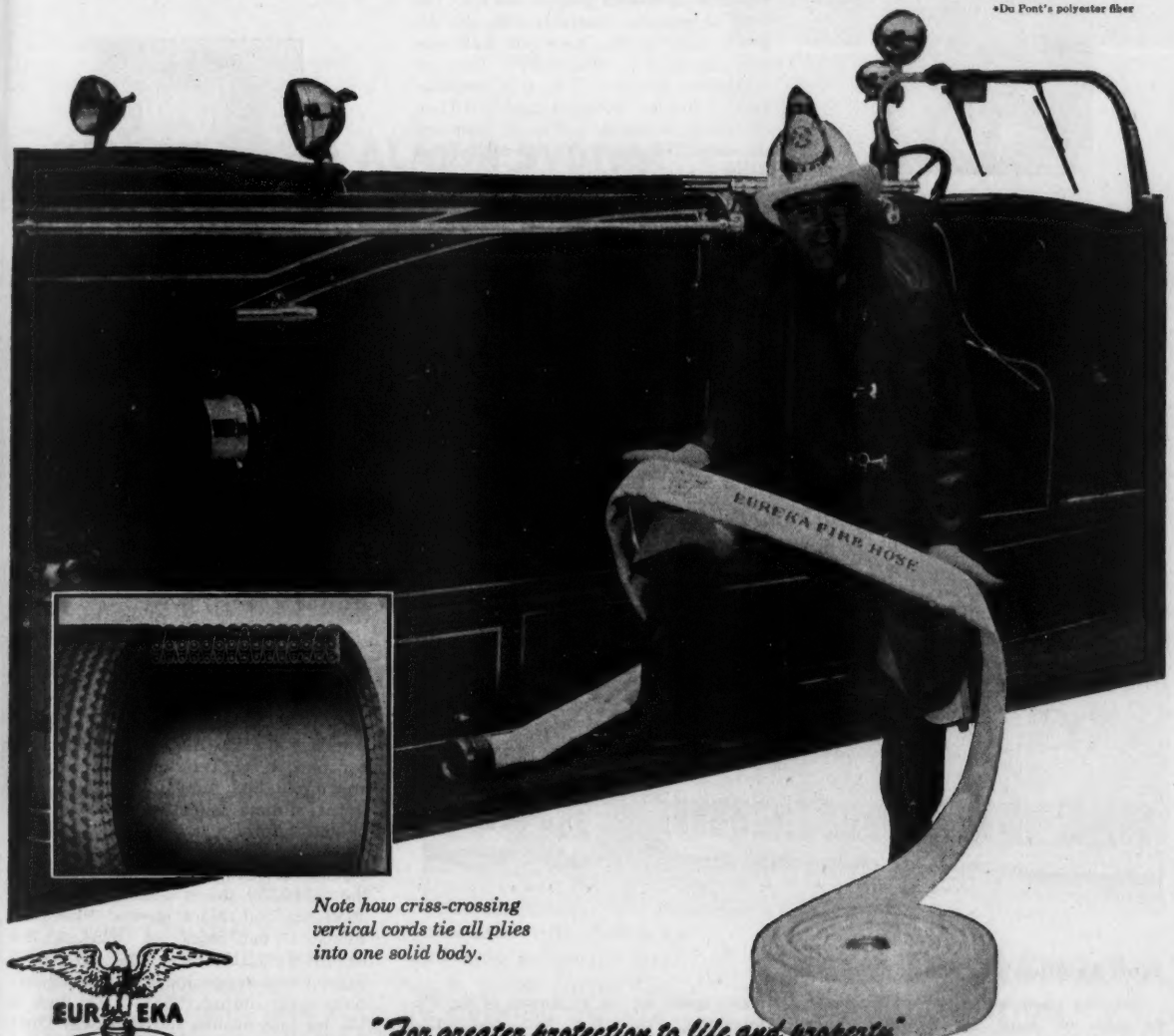
Most fire hose is "circular-woven", one ply at a time. Only Eureka furnishes *multiple-woven* hose.

Want to see the difference? Look at the cross-section of a Eureka multiple-woven hose. Notice those cords running up and down through the plies! You'll find them only in *multiple-woven* hose. The unique Eureka loom not only weaves all plies simultaneously but also weaves through them these additional warp threads that bind together the filler cords of *all* plies into a single homogeneous jacket. Result:

- Greater strength from the same weight of materials,
- No space between plies to collect dirt and moisture,
- Longer, safer service life,
- No writhing under hydrostatic pressure.

Built to withstand pressures of either 400 or 600 pounds, Eureka Multiple-Woven Hose—with filler (circular) cords of cotton or Dacron*—can be furnished in all standard diameters. Your Eureka representative will gladly give you all details. Remember, he is a fire hose specialist!

*Du Pont's polyester fiber



Note how criss-crossing vertical cords tie all plies into one solid body.

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Rubber-Lined Fire Hose

1 Market Street • Passaic, New Jersey

Division of United States Rubber

WHAT'S NEW

Among the Manufacturers

- products
- processes
- personalities

Tracy Heads Ward LaFrance

F. Norman Tracy has been elected president of Ward LaFrance Truck Corp., a subsidiary of Glen Alden Corporation. He succeeds Joseph G. Grossman who has retired as president after serving

with the company since its inception 38 years ago.

Mr. Tracy, 46, had been vice-president and general manager since March 1954. He joined the company in 1945 as a district sales manager.

Emergency Lighting Catalogue

The Electric Cord Company, 21 Spruce Street, New York 38, New York has announced that it's emergency lighting equipment catalog No. 11-1957 is now ready for distribution. Copies may be obtained by writing directly to the manufacturer.

Large Order for Crash Trucks

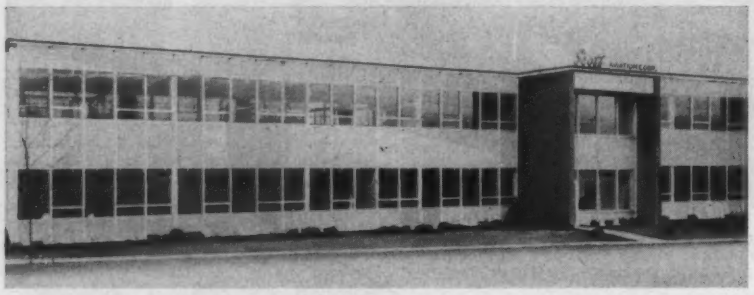
The American LaFrance Corporation, Elmira, N. Y., has recently been awarded an Air Force Contract amounting to approximately $6,961,000 for specially-designed crash fire and rescue trucks, with an option on the part of the Air Force to purchase spare parts in additional amounts up to an equivalent of 20 per cent of the equipment contract price.

American LaFrance has collaborated with the Air Force for more than seven years in the design and development of this type of special purpose vehicle. The total of previous contracts with the Air Force fulfilled by American LaFrance has amounted to $59,600,000. The new apparatus, Model 0-11-B, is a modification of the last previous model, 0-11-A, of which American LaFrance built and delivered 730 up to the end of the year 1954.

Extinguisher Selection Chart

A new chart, "How to Select a Fire Extinguisher" is available free of charge from the Fire Equipment Manufacturers' Association, Inc., Suite 759, One Gateway Center, Pittsburgh 22, Pa.

The chart lists basic types of extinguishers and shows at a glance which to use against the three classes of fires: Class A—wood, paper, rubbish, etc.; Class B—volatile liquids; Class C—electrical fires. The effects of temperature, operating ranges, how the various extinguishing agents kill fire, and other information on extinguishers are included on the chart.



Scott Aviation's Expansion Program

Keeping pace with the rapid increase in sales of Scott Air-Pak and other breathing equipment, Scott Aviation's expansion program is marked by the completion of its new office building adjoining the manufacturing plant in Lancaster, N. Y. The modern structure affords nearly 6,000 square feet of working space for the growing administrative staff, and releases space for the expansion of the Engineering, Production and Accounting Departments.

The company also announced two new appointments to its staff. Robert J. Brewer has been named sales promotion manager, with headquarters in the home office and James H. Flannery regional sales representative, in Studio City, Cal.

New Eureka Sales Manager

Joseph D. Drohan has been appointed sales manager for United States Rubber Co.'s Eureka fire hose, it was announced by E. T. Day, general sales manager for the company's mechanical goods division.

Joseph D. Drohan

Jonas Smith

Mr. Drohan, a graduate of Colgate University, has been associated with the rubber company's mechanical goods sales department for six years. He has been acting sales manager since December, replacing Jonas Smith, who is retiring. Mr. Smith has been associated with the company for 36 years, and for the past six years has been sales manager of Eureka fire hose.

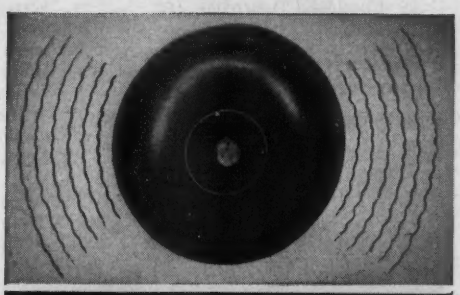
Mack Trucks Reports All-Time Highs for 1956

Earnings of Mack Trucks, Inc., rose 55 per cent in 1956, on a sales gain of 31 per cent, P. O. Peterson, president, has announced. Both sales and earnings established all-time highs in the company's 57-year history.

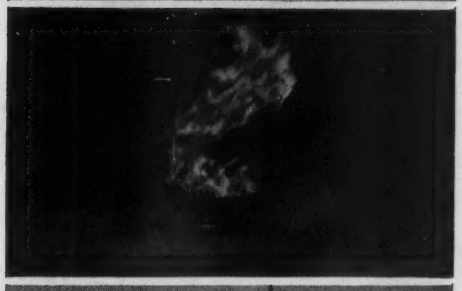
Net income after taxes for the year reached $12,103,763, or $4.75 a share on the 2,549,359 shares outstanding at the 1956 year-end. Mack showed 1956 consolidated net sales of $254,243,784 against $194,317,035 in 1955. The 1956 figure includes operations of two acquisitions made during 1956—C. D. Beck & Co. for four months and Brockway Division for three months. The report pointed out, however, that a record high was reached without these additions. On a unit basis, Mack truck sales were up 32 per cent; fire apparatus, 38 per cent and buses, 25 per cent.

Continued on page 344

FIRE ALARM!

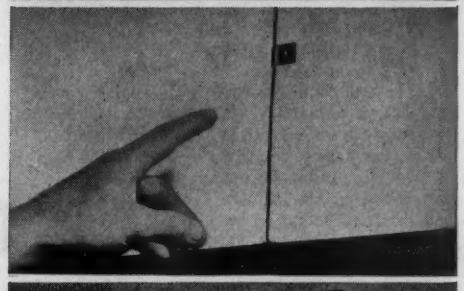


AT THE FIRST HOT BREATH OF FIRE



KIDDE'S ATMO ALARM SYSTEM

(using rate-of-temperature-rise tubing)

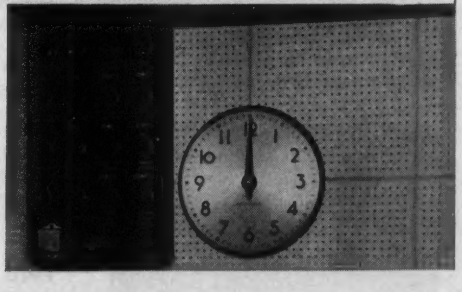


TRIGGERS ALARM AT FIRE AREA

(outside building or at local fire department)

GIVES FIRE LOCATION AT ANNUNCIATOR PANEL

(usually at manned telephone switchboard)



Save priceless lives, save valuable buildings with Kidde's Atmo Fire Alarm System. This wide-area automatic fire detecting and warning system sounds alarm almost the moment fire starts. Ideal where life protection and early fire warning is essential, the Kidde Atmo system operates independently of regular power sources, gives protection even if outside power fails. What's more, the system can close doors, shut off fans, motors, blowers. Is automatically self-resetting after use or test. Write today for Kidde's Atmo Alarm System booklet.

Kidde—Atmo

FIRE DETECTION

J. H. SCHARFF, INC.

433 Main Street, Orange, N. J.

A Subsidiary of
Walter Kidde & Company, Inc.

Continued from page 342

Transistorized Electronic Megaphone

One of the lightest electronic megaphones ever produced, the Pye "Transhailer" features a germanium transistor amplifier for dependability and is powered by standard flashlight batteries. The Transhailer has a 10½-inch diameter horn, is only 15½ inches long, and its over-all weight with batteries is only 5 pounds.

The lightweight power megaphone has a maximum power output of 3½ watts, resulting in an operating range of more than ¼ mile under normal noise conditions. It is completely self-contained, in one sturdy weather-resistant unit, with a pistol grip handle and trigger control.

Ideal for public protection agencies and industrial use, or wherever distance and/or background noise hinder voice power or intelligibility. Manufactured by Pye, Ltd. of Cambridge, England and distributed by Pye Corporation of America (Telecommunications Division), 1149 Raritan Avenue, Highland Park, N. J.

Unique Water Tank Gauge

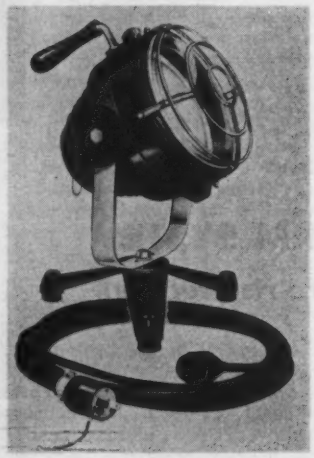
The Sharpsville Steel Fabricators, Inc., of Sharpsville, Pa., has recently delivered a pumper-tanker to the Orangeville, Ohio, Fire Department which is equipped with a boiler-type water gauge—a radical departure from the conventional float-type.

The gauge is recessed in the pump operator's panel to eliminate accidental damage and is so mounted in rubber that normal apparatus vibration is removed from the glass. The assembly is illuminated for night use by means of two lamps equipped with diffusing lenses, located behind the glass tube.

The glass shows the exact depth of water available in the tank and freezing is prevented by engine heat trapped inside the fully-enclosed pump compartments. The gauge is vented to atmosphere and carries no pressure. It is equipped with a drain and a shut-off valve at the tank.

For further information, contact the manufacturer.

High Power Floodlight Announced



A new power beam floodlight made by Stonco Electric Products Company, 333 Monroe Avenue, Kenilworth, N. J., is reported the highest powered portable unit ever made for its size and weight. Producing 121,500 candlepower with only a 500-watt rating, the new floodlight weighs 13 pounds complete with 2,000-hour power spot or flood, 25-foot detachable three-conductor cord with plug and adapter and protective lens with guard. Construction is of heavy-duty cast aluminum with internal and external cooling ribs for rapid heat dissipation.

The unit is available as portable (illustrated) or truck mount with heavy mounting plate instead of tripod. Bulletin No. 148, describing the unit, can be secured by writing the manufacturer.

FWD Names Sturwold District Sales Manager

Arthur J. Sturwold has been named a district sales manager for Four Wheel Drive Auto Company in Illinois, Michigan, northern Indiana, and eastern Missouri, it was announced by G. F. DeCoursin, FWD vice-president-sales. Sturwold has been with FWD since June 1955, as a transport sales representative in Illinois. In his new capacity with FWD, he will work with company dealers in sales of FWD all-wheel-drive fire and other trucks.

Peterson of Mack Honored

P. O. Peterson, president of Mack Trucks, Inc., beams with pleasure as Chief Wayne E. Swanson of Rockford, Ill., president of the International Association of Fire Chiefs, pins a badge of honorary chief of Rockford on him. Looking on at left is Bert Nelson, manager of Mack's fire apparatus division. The award, presented at a luncheon at the Plainfield, N. J., Country Club on February 28, was in recognition on Mack's long service as a builder of fire apparatus.

In his presentation remarks, Chief Swanson pointed out that fire chiefs look with favor on fire trucks which offer greater maneuverability and simplicity of operation. He congratulated the company on being the first to come out with a shift-less transmission for fire apparatus. The new Mack model which uses a torque converter to avoid manual shifting was recently announced and is now in production.

GE Announces New Battery

The General Electric Company has announced pilot production of a tiny new power source, only 1/35 the size of a common flashlight battery, but with 60 times the voltage of such a battery.

Designed for highly-specialized uses requiring small size, long life and high voltage output, the new cylindrical, 1-inch-long battery has a projected life of over 20 years. It produces 95 volts, weighs less than one-fifth ounce and is less than one-third inch in diameter. It contains 127 hair-thin discs, of silver and copper compounds and carbon, stacked tightly within the case.

The company believes it can be a new power source in such equipment as remote fire and radiation warning devices, deep well survey equipment and electronic instruments.

RCA Develops Pocket Receiver

The first commercial pocket-size FM radio receiver for mobile communication service has been developed by the Radio Corporation of America and will be available later this year. The fully transistorized instrument is designed to provide personalized extension of several miles for radio systems now operating in the 150-mc band.

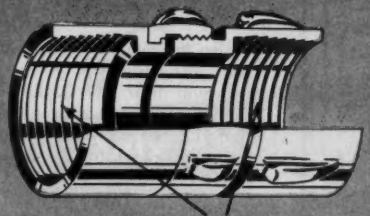
Continued on page 375

LIGHTWEIGHT
FORGEX couplings
for LIGHTWEIGHT
synthetic-fibre hose
Make Sense!

FORGEX

The lighter, tougher DROP-FORGED COUPLING

More and more fire companies specify FORGEX with every order of lightweight, synthetic fibre fire hose. Independent laboratory tests PROVE Forgex couplings up to 100% stronger than other couplings . . . yet they weigh only half as much. Drop forging's the secret . . . combines lightness with super toughness. Tested on hose to over 1500 pounds, independent laboratory tests proved that "the hose will blow before FORGEX will go." All brass, non-corrosive, cost no more than ordinary couplings.



FORGEX has the tapered hose bowl that grips the hose forever.

SPECIFY FORGEX®

AKRON BRASS
FIRE FIGHTING EQUIPMENT

AKRON BRASS MFG. CO., INC. • WOOSTER, OHIO

FALSE ALARMS

Modern Miss

The new proby had offered his heart and hand to his pride and joy.

"Before I decide," she said sweetly, "I want to ask you a question."

"Anything you say, Baby!"

"Do you drink anything?"

Proby replied without a minute's hesitation: "Anything."

And so she fell right into his arms.

The firehouse philosopher: Figures don't lie but there's a lot of 'em on the streets that look a little too open and above board."

Great Guard!

"My wife's scared to death some fellow's gonna steal her clothes."

"Well, doesn't she have 'em insured?"

"Hell, she's got a better system than that. I got home last night and found a guy in her clothes closet, guarding 'em!"

Fire Fighter, on vacation at Ittybitty-beach (banging on table in roadside diner): "The service here is lousy. Look at my glass; it's empty. What have I gotta do to get some water?"

Diner Waitress: "Try settin' fire to yourself, buster!"

Adolescence is when a boy goes from a Mickey Mouse watch to a Marilyn Monroe calendar.—*American Eagle.*

A gal can have a lot of evening dresses and yet seem almost always out of them.

You've heard that wheeze about the Englishman who came to this country and when he received his income tax blank scrutined it closely and then sent it back with the notation: "I have given the matter careful thought and have decided not to join the Income Tax."

U. S. Treasurer Ivy Baker Priest told one on herself at a recent National Safety Council luncheon.

"Driving across country, I was arrested for speeding in a small western town and taken to the court in the hamlet's fire station. When I presented my license, the judge turned to the loungers around the fire engine and announced: *Boys, we really hit the jackpot this time!*

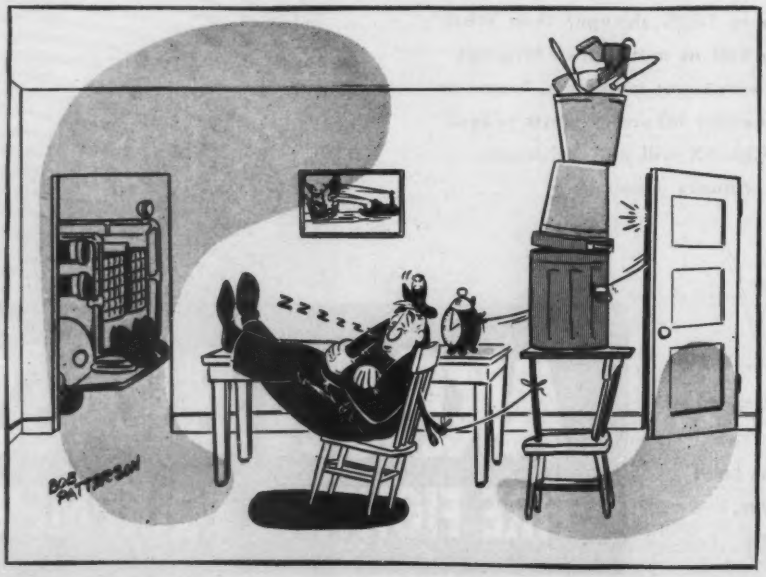
Old School

The airliner was about to land and the hostess making the rounds told all passengers to fasten their safety belts. All complied except one man and thinking the haughty looking gentleman might be a little deaf, she spoke directly to him in a loud voice.

"Please, sir, will you fasten your safety belt?"

"My dear young lady," he replied with impatience, "I don't have to. I wear suspenders."

Kinkchaser was on his way to an "indoctrination" lecture by one of the brass hats. "I'm going with an open mind, no prejudices whatever, and a cool rational approach to listen to what I'm damn sure is pure bunk," he said.



"When I pull the alarm button on the clock you run through the room, yelling 'It's a long ring!' "

Blood Will Tell!

A fireman was injured and needed three transfusions. His blood donor was a healthy vigorous young Scot. For the first transfusion the Scot got $50. For the second, he got $25. But after the third the patient had so much Scotch blood in him that he just murmured "Thanks."

It's not the ups and downs of life that bother us; it's the jerks!

Speaking of short stories, "Did you ever hear the world's shortest war story?

"No."

"Bang! Bang! Who went there?"

Arson Anecdotes

Accused of setting fire to his Alpena, Mich. home a youth explained: "I couldn't have done it. I was in Detroit that day stealing a car."

In Detroit a man gave his reason for burning down his home: "I didn't like the neighborhood."

We sorta like this definition of municipal officials, by George Nathan: "Bad officials are elected by good citizens who do not vote."

Then there's the one about Pipeman Rednose who fell off the pier during a waterfront fire. His flask kept him afloat until his buddies heard his cries for help.

Men are the funniest animals. They've always known that one horse can run faster than another, and yet they squander millions of hard earned dollars each year to see the simple fact demonstrated over and over!

"Young lady, I won't have you standing on the front porch with that young fireman of yours."

"But father, I only stayed for a second."

"Nonsense, I distinctly heard the third, fourth and fifth!"

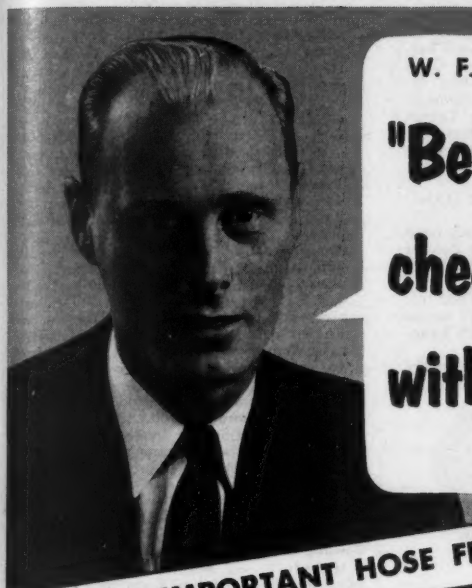
First fire fighter: "What went on at the chief's conventions?"

Second ditto: "Well, the guy who was to give the invocation gets up on the platform, takes a good look at the delegates, and prays for the fire service."

After what seemed like hours, the doctor emerged from the examination room and addressed himself to Fireman Spiggott.

"Sir, your wife has quinsy," he said.

"Omigosh," exclaimed Spiggott, "That makes fifteen!"



W. F. ANDERSON, BOSTON Hose Sales Mgr., says:

"Before you buy fire hose... check BOSTON'S advantages with any other hose!"

IMPORTANT HOSE FEATURES	BOSTON Fire Hose	Other Mfrs. Fire Hose
1 A hose for every fire fighting need from a proven, reliable source.	✓	
2 Single responsibility — couplings and fittings custom-made by same company that manufactures the hose.	✓	
3 Made by the originators of circular woven fire hose — with over 75 years of experience.	✓	
4 Seamless tube of highest quality rubber for longest service life and least water absorption.	✓	
5 DACRON filler for lightness, extra strength, superior flexibility.	✓	
6 Longer service life under most severe conditions.	✓	
7 Every length pressure tested prior to shipment.	✓	
8 Maximum protection against mildew, rot, and freezing.	✓	
9 Compact . . . coils easily and dries quickly.	✓	
10 Fast, personalized service from warehouses throughout the United States.	✓	

Only BOSTON offers EVERY important feature

See your BOSTON agent or write to BOSTON for free descriptive literature

BOSTON FIRE HOSE

BOSTON WOVEN HOSE & RUBBER COMPANY
BOSTON 3, MASSACHUSETTS

Also producers of INDUSTRIAL HOSE • BELTING • V-BELTS • MATTING • PACKING • TAPE

What's Burning?

THE FOLLOWING LIST includes fires of $10,000 and over in the United States and Canada for the period from February 22nd to March 19th.

Little Rock, Ark.—Boat factory damaged.

Newport, Ark.—Lumber yard and three trucks of Moore & Cone Lumber Company destroyed.

Los Angeles, Calif.—Kay Thomas Sales Co. plant destroyed; adjacent Standard Office damaged. Accumulated gas explosion.

Oleum, Calif.—Oil storage tank at Union Oil Co. destroyed.

Sacramento, Calif.—Vitafreeze Equipment Co. destroyed.

San Bernardino, Calif.—Santa Fe Federal Savings & Loan Co., Thrift Development Corp. and George Holbrook real estate firm destroyed; Philips Jewelry Co., Hollis Widmeyer Insurance Co., Associated Hearing Center, Blue Cross and insurance offices damaged.

Meriden, Conn.—Two adjoining buildings, housing 25 businesses, radio station and apartments, destroyed.

Somers, Conn.—Somers Inn destroyed. Defective oil burner.

Chicago, Ill.—Buildings housing Marson's retail furnishing store, apartments, S. Asher Butcher Shop, Rev. Holloway's Church and L. Ware barber shop, damaged.

Chicago, Ill.—Building housing currency exchange, tavern, Reproduction Co., silk screen processors and adjacent dwelling of M. Langtin, damaged.

Chicago, Ill.—Illinois Central Railroad freight house destroyed.

Chicago, Ill.—Film Row Restaurant and two adjacent buildings damaged.

Chicago, Ill.—Building housing U. S. Foot Appliance Corp., Delmar Products Co., Breeze Products and warehouses of Furkosh Memorial Hospital and Johnson Fare Box Co., damaged.

LeRoy, Ill.—Two buildings of a prefabricated homes factory destroyed.

Pecatonica, Ill.—Pecatonica Lumber Co. destroyed.

Evansville, Ind.—Building housing West Side Bowling Alleys and Jerry's Supermarket damaged.

Indianapolis, Ind.—Central Veneer Co. lumber mill damaged. Electric motor sparks.

Indianapolis, Ind.—Women's Wear Shop, adjacent Ballinger Music Store, Kerr's Cafeteria, Center Dry Cleaners, Burdsall Paint Co. and Sanders Beauty Shop damaged.

Marion, Ind.—Hutchins Clothing Store, Myers Jewelry Store, Roesslwr Jewelry Store, Mayo's Men's store, Moore Associates Store and Diane Women's Wear, damaged.

Fort Dodge, Iowa—Building housing Zakeer Auto & Home Supply Store destroyed.

Keokuk, Iowa—Taber Insurance Co. yard and buildings destroyed.

Pella, Iowa—Buerkens Manufacturing plant and office destroyed.

Albany, Ky.—Ferguson Bros. Hardware & Grocery Store demaged.

Bowling Green, Ky.—Boots & Saddle Club destroyed.

Louisville, Ky.—Gasoline Transport Co. garage destroyed. Defective steam jenny.

Salyersville, Ky.—Magoffin county courthouse destroyed.

New Orleans, La.—Imperial Theater destroyed.

Manchester, Me.—Cattle barn on Lakeview Farm destroyed.

Mapleton, Me.—Grain warehouse of State Road Grain Co. and nearby potato house damaged.

East New Market, Md.—Storage building of Eastern Shore Rendering Co. destroyed.

Ashland, Mass.—Drying building of Chemical Manufacturing Co. destroyed.

Boston, Mass.—Rhodes Brothers Grocery Co. and building of Frank Foy damaged.

Reading, Mass.—Highland Elementary School damaged.

Alpena, Mich.—Midway Supermarket destroyed.

Alpena, Mich.—Michigan State Liquor Control Commission retail store damaged.

Bay City, Mich.—Saginaw Bay industries plant damaged. Die machine lubricant ignited.

Cone, Mich.—Grain elevator destroyed.

Corunna, Mich.—Corunna Lumber & Coal Co. plant damaged; nearby dwelling of Kenneth Wilson destroyed.

Detroit, Mich.—The Ford Motor Co.'s giant Rouge plant damaged. Explosion.

Detroit, Mich.—East side building housing bar, bowling alley and two salesrooms, damaged.

Detroit, Mich.—National Food Store Supermarket damaged. Defective incinerator chimney.

Grand Rapids, Mich.—Walter's Sport Shop destroyed; adjacent Palance Sweet Shop and Wegal's Dress Shop damaged.

Hart, Mich.—Parish Bowl Mill destroyed.

Oxford, Mich.—Masonic Building housing lodge quarters, Oxford Tavern and Oxford Electric Co., destroyed; adjacent Van's Party Store and Granada Grocery damaged.

Ulen, Minn.—Grain elevator of Tri-County Farmers destroyed; four adjoining concrete silo bins damaged.

Hannibal, Mo.—Mississippi Valley Textile Company plant damaged.

Kansas City, Mo.—Puritan Hotel damaged.

Kansas City, Mo.—First Presbyterian Church damaged.

St. Louis, Mo.—Warehouse and office building of D-B Drug Co. damaged. Explosion.

Kalispell, Mont.—Flathead County Welfare Department damaged. Furnace explosion.

Missoula, Mont.—Missoula Cardboard Co. plant damaged.

Asbury Park, N. J.—Columbia Hotel destroyed; adjoining Commodore Hotel, rooming house, all closed, and garage damaged.

Atlantic City, N. J.—Merion Hotel and Sunny Seas destroyed.

Butler, N. J.—Pequance Rubber Co. plant destroyed; several oil tanks exploded and Susquehanna Railroad freight yard and power lines damaged by falling walls.

Hamilton Township, N. J.—Yardville Sales Center destroyed. Explosion.

Pleasantville, N. J.—Bar, restaurant and ban-

Here it is!

THE COMPLETE, FULL-SIZE RESUSCITATOR-INHALATOR plus POWER ASPIRATOR in a kit SO SMALL, SO LIGHT, SO EASY TO CARRY, USE OR STORE, (and SO LOW IN COST)

you can now provide this vital protection wherever there is a need!

E & J EMERGIKIT

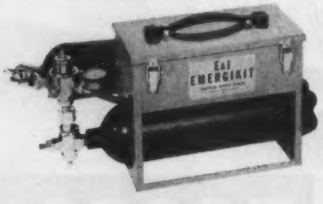
IDEAL *to equip individual fire trucks or Chief's cars with basic equipment for smoke suffocation or other resuscitation treatment in absence of Rescue Units.*

IDEAL *to easily carry up ladders or scaling hooks to trapped victims.*

IDEAL *to supply minimum-budget Departments or Volunteer Squads with essential rescue equipment of topmost quality.*

SINGLE CYLINDER CARRIED IN KIT FOR ALL PRIMARY TREATMENT

SECOND CYLINDER (or more) or LARGE TANK CONNECTOR attaches in moments without interrupting operation if prolonged treatment is required.



Secondary cylinder in detachable yoke

FOR FULL INFORMATION FAST — WRITE, WIRE OR PHONE

First Name in Resuscitators

E & J MANUFACTURING COMPANY

100 E. Graham Place • Burbank, Calif.

quet hall of Sherry's Motel and Restaurant destroyed.
Vernon, N. J.—Barn and cattle on Wilbur Masker farm destroyed.
Yardville, N. J.—Yardville Sales Center housing foodshop, bakeshop, plumbing, grocery and sporting goods sections, destroyed.
Ellenville, N. Y.—Building housing five and ten cent store destroyed.
Ellenville, N. Y.—Booksbaum Clothing Store, Town Tavern, Herman's Barber Shop and Crown Jewelry Store, destroyed.
Fulton, N. Y.—Checkerboard Feed Store and Henderson-Thompson Lumber Co. yard damaged.
Laurel Hollow, L. I. N. Y.—Former Tiffany jewelry family mansion, destroyed.
Liberty, N. Y.—Cory's Bar & Grill destroyed.
Rushville, N. Y.—Rushville Methodist Church destroyed.
Voohoesville, N. Y.—Feed mill destroyed.
Asheville, N. C.—Seventeen units of Saunders Motor Court destroyed. Arson.
Fayetteville, N. C.—Wonder Bar destroyed.
Jacksonville, N. C.—Midway Park community building destroyed.
Washington, N. C.—City-owned Negro elementary school damaged. Defective wiring in kitchen.
Cincinnati, Ohio—Wol processing plant damaged.
Cleveland, Ohio — Captain Frank's Seafood House destroyed.
Cleveland, Ohio—Glidden Co. Plant No. 1, manufacturing storing paint and varnish, destroyed.
Dayton, Ohio—Three buildings on Favorite Homestead Farm damaged.
Elyria, Ohio—Benson's Department Store, and adjoining buildings housing Singer Sewing Machine Co., Lorain Bank & Trust Co. and apartments, damaged.
Fairborn, Ohio—Shwartz's Jewelry store, adjoining Sports Car, Inc., Casebolt's Market and Sparh Printing Co., damaged. Overloaded electric circuit.
Fostoria, Ohio—American Railway Signal Co. destroyed.
New Paris, Ohio—Riegel Feed & Grain Elevator damaged. Fuel oil stove.
South Euclid, Ohio — South Euclid Lumber Company damaged.
Aurora, Ore.—Butteville Farms destroyed.
Canby, Ore.—Bertrand Chicken Hatchery destroyed.
Garibaldi, Ore. — Washington Plywood Mill damaged. Trash sparks.
Hillsboro, Ore.—Jossy's Food Market destroyed. Short circuit.
Portland, Ore.—Arleta Tavern destroyed. Explosion.
Powers, Ore.—Pioneer Theatre damaged. Electrical short.
Bradford, Pa. — Bradford Moose Lodge destroyed.
Dansville, Pa.—Building housing plant and equipment of Dansville Press, Inc. and quarters of Odd Fellows Lodge, damaged.
Elywn, Pa.—Main shop building at Williamson Free School of Mechanical Trades destroyed.
Indiana, Pa.—Equipment of Simpson Drilling Co. destroyed.
Manheim Township, Pa.—Main building of Lancaster Brick Co. destroyed.
Pittsburgh, Pa.—Building housing catering service destroyed.
Schuylkill Haven, Pa.—Argo knitting Mill & Bleachery destroyed. Explosions.
Schuylkill Haven, Pa.—Penn-Val Dyeing Co. damaged.
Sharpsburg, Pa.—Vacant building at 600 Main Street and adjacent building housing Coney Island Restaurant and apartments, destroyed.
Wilkes-Barre, Pa.—Stoehr Furniture Co. store building destroyed.
West Warwick, R. I.—Sinscalchi mercantile block damaged.
Mitchell, S. D.—Iverson-Max Motor Co. service department building destroyed. Auto gas tank exploded when drop of water fell on trouble lamp.
Huron, S. D.—Building housing Geyerman Department Store and Ruby Ann Bakery damaged.
Houston, Tex.—Helton Apartments and Helton Boat Works damaged.
Elsinore, Utah—Elsinore Roller Mills destroyed.
Hampton, Va.—Save-a-Stamp redemption store destroyed; bakery, rental office, cleaners, soda shop, restaurant, drug store and doctor's and dentist's offices, damaged.

CUTS FLASH COSTS!

Stroboflash® IV

with NICAD AC CONVERTER and Rechargeable Nickel Cadmium Battery

Graflex, maker of the Pacemaker Graphic 45 camera, now offers your department additional savings in flash pictures. The Stroboflash IV with Nicad AC Converter and rechargeable Nickel Cadmium Battery is the latest advancement in the field of electronic flash.

The Nicad AC Converter operates with a *rechargeable* nickel cadmium battery, or on regular 110-120 volt AC current. It reduces flash costs to just a fraction of a cent per shot. For instance, a Stroboflash IV set at full power enables your photographer to take at least 80 flash pictures before the self-contained nickel cadmium battery needs recharging. The battery can be recharged over one thousand times, resulting in as many as *80,000* flashes before the battery requires replacement. It is completely portable, is not subject to deterioration, and even under daily use has a life of 15 years!

The Nicad AC Converter can be interchanged with the dry cell batteries of the Stroboflash II, III and IV.

For additional information on Stroboflash electronic flash and the Pacemaker Graphic 45, call the local Graflex dealer listed in the yellow pages of your phone book, or write Dept. FE-47, Graflex, Inc., Rochester 8, N.Y.

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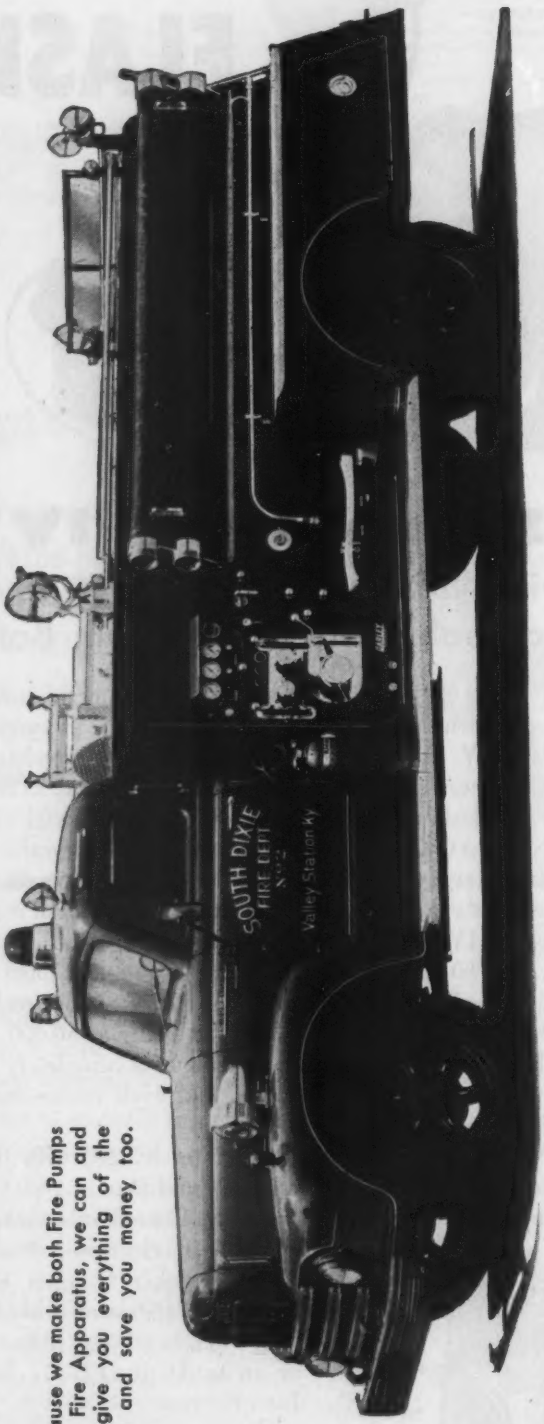
Darley Champion 750 Gallon Pumper



Because we make both Fire Pumps and Fire Apparatus, we can and do give you everything of the best and save you money too.

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Mt. Jackson, Va.—Shenandoah Caverns Hotel damaged.
Seattle, Wash.—Anthony's apartment dwelling destroyed. Cigarette.
Spokane, Wash.—Variety March destroyed.
Spokane, Wash.—Georgia Apartments damaged.
Spokane, Wash.—Spokane Trade School damaged.
Spokane, Wash.—Potaltch Yards and Union Sash & Door Co. destroyed. Arson.
Tacoma, Wash.—Building at Olin Mathieson Chemical Corp. destroyed. Explosion.
Yelm, Wash. — Thriftway Supermarket destroyed.
Milwaukee, Wis.—Milwaukee road roundhouse damaged.
White Rock, B. C.—Ten Beach Street cottages destroyed.
Prescott, Ont. — Prescott Brass Manufacturing Co. destroyed.
Toronto, Ont.—Mason & Risch Piano Co. damaged. Motor switch ignited paint.
Les Eboulements, Que.—School, dwellings of Alfred Tremblay, Georges Bouchard and Wilbrad Tremblay and latter's restaurant destroyed.
Longueil, Que. — Building housing plumber shop, doctor's office, millinery and shoe repair shop destroyed. Explosions.

World-Wide Fire News

Many Claims from Brooklyn Pier Fire

On March 3, the 90-day limit expired for filing claims against the City of New York for personal injuries and property damage growing out of the Brooklyn pier fire and explosion of last December 3.

It is said that more than 500 claims have been filed, the sums ranging from $10 to $1 million. On March 1 they included three for $250,000 each, some for $50,000 and several for $25,000.

Claimants charged that the city "negligently, carelessly and recklessly" failed to prevent the placing and storing of explosives on the pier.

High claim of $1 million was filed on behalf of a workman who charged that he was injured while working in the 36th Street Pier warehouse. He cited permanent multiple injuries, including brain damage and "severe psychic damage."

Down Under

Down in Australia, a man's car backfired and caught fire. The man jumped out to extinguish the flames and his pants caught fire. He yanked them off and threw them aside. The burning pants started a fire that burned 50 acres of wheat and pasture.

Disintegrated Scientist

During a discussion of the hazards of rocket fuels, it was disclosed that a scientist was killed last summer and his body literally disintegrated in an earth-shaking explosion at a plant manufacturing rocket fuel to be used in proposed earth satellites.

The 51-year-old employee of a rocket company in Mentone, five miles east of Redlands, Calif., disappeared, leaving behind only a shoe found on the roof of a nearby building and bits of cloth be-

lieved to be part of his apparel which were found in the wreckage of what was part of the plant.

Company officials said the scientist was inspecting a batch of rocket propellant in a curing oven when it inexplicably caught fire. The fuel generates a heat of about 40,000 degrees F.

Diplomatic Immunity for Fire Fighting Lifted in Canada

The Dominion's External Affairs Department has told diplomats in Ottawa that diplomatic immunity goes only so far when fire is involved.

Reports have it that a letter to that effect, circulated last summer to heads of all diplomatic missions by the department, was a sequel to fire department claims of obstruction by the Soviet Embassy staff in Ottawa when the Embassy was destroyed by fire on New Year's Day of 1956 (FIRE ENGINEERING, February 1956).

Ottawa fire officials complained that Russian diplomats obstructed their efforts, apparently determined that firemen would not enter code rooms.

The Government's letter said, in part: "The Secretary of State for External Affairs wishes to state that in the event of a fire breaking out in a mission, the Canadian Government expects the fire department would be summoned promptly (this was not the case in the Soviet Embassy fire—Editor) and he expresses the hope that the department would be allowed immediate access to the premises."

But if an embassy fire were such as to endanger life, public safety or other properties, "The fire department would be justified in taking the necessary measures for its control."

The Government is reported to have relayed separately to the diplomats word that the Ottawa Fire Department is prepared to examine their premises and advise on fire prevention.

Fresh from the World News Ticker

Fire in a settlement for refugees from Communist North Viet Nam, eight miles from Saigon, killed seven persons and left thousands without shelter March 1 . . Fire destroyed a Navy blimp after it touched down on the runway at the Weeksville Naval Air Station near Elizabeth City, N. C., March 5, but seven crewmen leaped to safety and were uninjured . . . A new note, in fact several of them, were struck in Toronto, Ont., March 6 when fire burned 900 pianos and the plant of the Mason and Risch Manufacturing Co., piano manufacturers . . . In Warsaw, Poland, workmen renovating the Czartoryski Museum found one historic item they hadn't expected—a parcel containing enough nitroglycerine to demolish the whole neighborhood. Explosive was apparently left behind by retreating German troops in 1945 . . . On February 23 last, 17-year-old American actress Jean Seberg suffered first degree burns in a mishap while being

NEW "QUAKER 100" is made from extra-long staple cotton, chemically treated to keep its flexibility and reduce elongation.

NOW! 1½" DOUBLE JACKET MUNICIPAL FIRE HOSE IN 100-FOOT LENGTHS!

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● ***It's light!*** One coupled length of "Quaker 100" weighs only 34½ lbs.

● ***It's strong!*** Specially treated cotton provides at least 10% more strength in each warp strand woven into the jacket. (Average burst pressure per three foot length is 1200 lbs.)

● ***It's quick drying!*** "Quaker 100" absorbs 25% less water than conventional 600 lb. dacron filler hose.

● ***It goes into action quickly!*** 100 feet long, "Quaker 100" reduces by 50% the danger of couplings pulling off or snagging.

SEE THE SAVINGS! See how easy "Quaker 100" is to use and maintain! Call your Quaker-Quaker Pioneer distributor today. For free brochure, write: *H. K. Porter Company, Inc., Quaker Rubber Division,* Philadelphia 24, Pennsylvania, or Pittsburg, California.

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CAIRNS LEATHER FIRE HELMET

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The "original" of all leather helmets, the "NEW YORKER" was introduced by CAIRNS in the early 1800's and has steadily been improved in design and material throughout the years since. Its selected, specially-tanned, top-grain steer hide leather and its time-tested design make the "NEW YORKER" the safest, toughest, strongest, most durable helmet on the market — approved and accepted by the largest, most efficient fire departments in America.

The CAIRNS "LIFE-GUARD" LINE also includes other leather helmets, in other styles and weights — as well as helmets in aluminum and FLINT-FLEX plastic in regulation and drop-brim styles.

Write for Catalog 351 showing everything a fireman needs for his personal equipment — together with Department Record Books, Secretary's Books, and printed forms.

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SINCE 1836

"burned at the stake" in a Joan of Arc movie scene. The fire which was supposed to "burn her without burning her," was too realistic and an ignition of gases seared her hand, tummy and hair . . . Canada's atomic establishment at Chalk River, Ont., went into a turmoil February 25 when an accidental explosion of a photographer's flashbulb set off an alarm. The explosion released the main safety switch and touched off blaring horns and clanging bells of the plant's general alarm system. More than 70 Ottawa high school teachers who were visiting the plant, got an unexpected thrill—and chill—until they were assured there was no cause for alarm . . . There hasn't been much said about it, but when two maintenance hangars and four planes were destroyed or damaged by fire at McCord Air Force Base, Tacoma, Wash., on January 15 last, the loss was set at a paltry $3 million-plus . . . Fire aboard the Brazilian tanker "Amapa" on January 18, caused the death of two sailors and injuries to more than 30 others, with property loss of $4 million. Ten crewmen were listed as missing but believed saved. Some of the tanker's gasoline spilled on the water. Exhaust of a ferryboat ignited it and flames spread to the tanker. Some 6,700 barrels of gasoline went up with the ship . . . Another tanker fire, this aboard the French ship "Janina," January 15 resulted more happily. The 48 crewmen were all saved by ships that rushed to the rescue following the tanker's S O S . . . Delayed report tells of the near destruction of the Dutch coastal ship "Pegasus" off Portland, England, harbor when a cask of chemicals—reported to be sodium and calcium carbide—let go. The ensuing fire was controlled by a fireboat. No injuries. □□

February Fire Losses

Estimated fire losses in the United States during February amounted to $9,569,000, the National Board of Fire Underwriters has reported.

According to Lewis A. Vincent, NBFU's general manager, this $95,569,000 loss represents an increase of 13.7 per cent over losses of $84,041,000 reported for February 1956, and a decrease of 17.1 per cent from losses of $115,272,000 for January 1957.

Losses for the first two months of 1957 now total $210,841,000, an increase of 16.5 per cent over the first two months of 1956, when they amounted to $181,013,000.

These estimated losses include an allowance for uninsured and unreported losses.

New York Plans Helicopter

The New York Fire Department may become airborne in the near future. It was recently announced that the department is planning to acquire a helicopter capable of carrying ten men, a 500-gallon foam tank, a pump and other fire fighting equipment. It would be used for hard-to-get-at fires.

Obituaries

Chief Arthur Spence

Chief Arthur Spence, 63, of the St. Boniface, Manitoba, Fire Department died on January 30, following a fall at his home. A veteran of 37 years service, he had headed the St. Boniface department for the past 25 years.

Chief Spence was appointed to the department in 1919, became a captain in 1923 and was appointed chief in 1932. He was a past Manitoba director of the Dominion Association of Fire Chiefs.

Chief Lee Bond

Lee Bond, 76, chief of the Brookfield, Mo., Fire Department since 1942 and a fireman for 45 years, died on March 2, after a short illness. He was a long-time member of the Missouri Valley Association of Fire Chiefs and the International Association of Fire Chiefs, and was a past vice-president of the Missouri Fire Chiefs Association.

C. E. Johnson, NBFU

Chester E. Johnson, of Montgomery, Ala., who retired as special agent of the National Board of Fire Underwriters on May 1, 1950, died March 11.

Mr. Johnson joined the National Board on February 6, 1927.

He served as State Fire Marshal of Alabama from 1923 to 1926 and as president of the Fire Marshal's Association of North America during 1926.

Chief Robert Newton

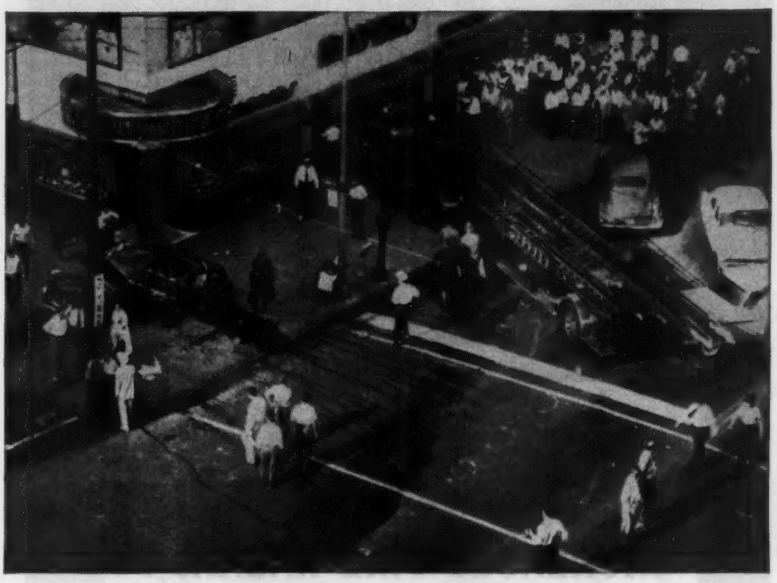
Chief Robert Newton, 29, a former member of the Los Alamos, N. M., Fire Department was killed in an automobile accident near Tucumcari, N. M., on February 24. Chief Newton was enroute to Nichol's Hills, Okla., to assume the duties of chief of that department when the car he was driving left the road. He was pinned under the wreck for about 26 hours in sub-freezing weather.

Chief Newton was at one time a member of the Seminole, Okla., Fire Department and was a student of fire protection at Oklahoma A & M College.

John T. Corley

John T. Corley, 84, president of the J. M. Baker Pattern Co. and former state senator died on February 4 in Providence, R. I. Mr. Corley was widely known in the New England area for his invention of roof and dock pipes, revolving turret pipes and fog nozzles. He was associated with the Baker Company for over 60 years and served as its president since 1928.

Eliminate This!



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RADIO TRAFFIC CONTROLLERS

Crashes like this Cost Lives . . . Property . . . Money . . . and tie-up badly needed equipment and highly trained personnel. *These tragedies virtually can be eliminated!*

The driver of an emergency vehicle can have uncontested, clear right-of-way for blocks ahead . . . he can stop all traffic on his route. He does it with EL-TEC, an electronics system for controlling traffic from a moving emergency vehicle.

EL-TEC is new, but years of research and development have proved its dependability. The system and equipment have been hailed as the most important stride in emergency traffic safety in many years.

EL-TEC has been commended by the nation's leading police, fire and traffic officials as well as various State Safety Committees and Highway Commissions.

Electronic Protection Inc.

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The Only FCC Approved System For Emergency Traffic Control

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GET THE FACTS!
SEND COUPON TODAY!

You owe it to yourself, your community, your firemen, policemen and all emergency drivers to learn how low-cost, reliable EL-TEC Radio Traffic Controllers can save lives, prevent suffering, cut down property damage, keep all emergency equipment "in service."

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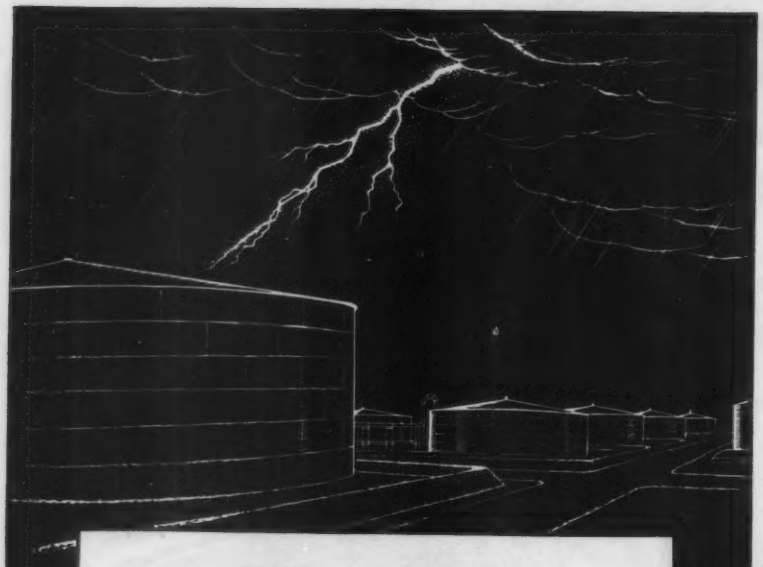

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INCREASED FIRE HAZARD?

Although greater storage
capacity can spell
big advantages in marketing,
it is certain
to bring an increase
in fire hazard . . .
particularly where flammable
liquids are stored.
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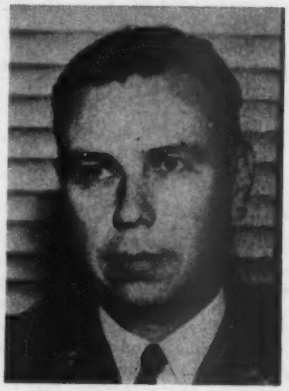
NATIONAL FOAM FIRE PROTECTION SYSTEM

The only company exclusively engaged in the design, development and manufacture of foam fire protection equipment and chemicals.

Persons in the News

Chief Bahme Advances

Charles W. Bahme has been promoted to deputy chief in command of the Personnel and Training Bureau of the Los Angeles, Cal., Fire Department.



Chief Bahme was in charge of Battalion 5A in the Hollywood area. He is well known as an instructor in the University of Southern California's Fire Administration training program.

Cliff Dektar

Conroe Department Awards Diamond Pins To Two Veterans

The Conroe, Texas, Volunteer Fire Department recently honored two of their veteran members for 25 years of service to the community and the department. Fire Chief Perrin Cranford and Captain Fred Lamp were presented with diamond-studded firemen's hats in recognition of their long and faithful service.

Chaplain R. A. Delson (right) is shown presenting diamond studded hat pins to Chief Perrin Cranford (center) and Captain Fred Lamp (left)

Chief Cranford is vice-president of the Southwest Division of the International Association of Fire Chiefs and a member of the I.A.F.C. Committee on Volunteers. Captain Lamp heads the First Aid Squad of the Conroe department.

Leggat on State Advisory Board

Alexander W. Leggat, chief of the Mount Vernon, N. Y., Fire Department, was recently named by Governor Averell Harriman to serve on the New York State Fire Advisory Board.

California Chiefs in Accident

Three of California's top fire chiefs escaped serious injury February 28 when the car in which they were riding was demolished in a collision at an Alhambra intersection.

Chief William Murray of San Francisco, Los Angeles County Fire Chief Keith E. Klinger, and Deputy L. A. County Chief John Duncan were all riding in Klinger's official sedan when a motorist ran through a stop sign and hit the car broadside.

Chief Murray suffered broken ribs, while Duncan and Klinger were badly bruised and shaken up as was Klinger's driver, Fireman Willard Miller.

—Cliff Dektar

Curb Party Line, Say Firemen

Connecticut firemen, 25,000 of them, reportedly would back a bill with teeth to penalize persons who refuse to yield a party telephone line in time of emergency.

The bill proposed by Rep. Beulah L. Blackman (R-Trumbull), would make it a misdemeanor to "willfully refuse" to yield a party line when informed that it is needed for an emergency call to fire or police department, or for medical aid or ambulance service. The bill would also make it a misdemeanor to secure the use of party line by falsely stating it is needed for an emergency call.

John Moehring of Stamford, secretary of the Connecticut State Fireman's Association, told the Public Utilities Committee of the Legislature in Hartford that New York has such a law and the proposed measure has been endorsed by Connecticut fire chiefs.

It was pointed out that "women talking over bridge club affairs" or "teenagers discussing Elvis Presley," could block the use of party lines in an emergency relating to life or property. There have been instances in the state in which failure to yield a party line in emergencies has resulted in serious consequences.

There was no opposition to the bill.

Girls Scholarship Offer

The Briarcliff Manor Fire Department, Westchester County, N. Y., through the courtesy of Briarcliff College, is offering a two-year scholarship of $2,400 covering tuition and lunches. Named the "William A. Magee Scholarship," in honor of the president of the Westchester County Volunteer Firemen's Association, it will be bestowed on the daughter of an active volunteer fireman of the county.

Chief William H. Bowers of the Briarcliff Department has notified each of the 162 member companies in the county that the regular admission requirements and standards of Briarcliff will be used in selecting the candidate. The girl chosen must be a graduate of a Westchester high school.

"THIS RACE WILL BE A CINCH FOR OUR MEN WITH THAT LIGHTWEIGHT, EASY HANDLING HEWITT-ROBINS 'DACRON'* FILLER HOSE."

*DU PONT T. M.

Hewitt-Robins manufactures all types of Municipal and Industrial Fire Hose

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Among the Buffs

By Paul C. Ditzel

PUBLIC RELATIONS is both a science and an art that we are hearing more about every day. And while today's businessmen are becoming increasingly aware of the need for it in their everyday contacts with the public, it's time that buffs themselves start thinking in terms of public relations.

Let's take the example of the Friendship Fire Association headquartered at Engine 31 of the Washington, D. C., Fire Department, 4930 Connecticut Avenue. This organization is no stranger to this column and we've frequently been able to report their unique ideas, thanks to our correspondent there, John Lee Turner, club secretary.

Recently the Friendship boys sent red and white ball point pens to newspaper editors in that area, together with an excellently prepared news release that smacks of professional ability. With the thought in mind that perhaps other clubs might like to steal a leaf from the Friendship book, let's examine the release for a moment.

The news "peg" and "lead" contain the announcement of the club's officers who were re-elected. The release then goes on to explain that the group was founded in 1940 and points out that the Friendship Association is "one of the only two (buff clubs) in the country so well thought of by Fire Department officials as to be given quarters in a city firehouse."

Next, the release describes the organization's clubroom and museum, then goes on to explain exactly what the Friendship boys do in the way of assisting the firemen. The press release is concise and is boiled down to four short paragraphs which the city editors would have no trouble in using as the basis for a news or feature story.

I might add that any clubs deciding to send out similar news releases to editors in the hopes of acquainting the public with their work should give consideration to the following technical means of preparation: Put the name, address and telephone number of your club or its press secretary in the upper right hand column. Double-space your copy, keep it as short as possible without losing the gist of what you want to say and above all make them as neat as possible. Try not to send carbon copies. City editors always like to see typed originals or mimeographed releases. Too, don't be disappointed if your news release isn't used immediately. There are always explanations—and usually good ones—for excellent news releases to be turned down. Simply remember: Don't get discouraged. The story the city editor turns down today might be used in a different version in a month.

I dwell at length on this matter of telling your club's story via the information mediums only because I believe we've long since passed the time when buffs and buff clubs need to apologize for the fact that they're "sparks." By setting good examples yourselves you automatically discredit the lunatic fringe that infests every hobby.

Judging from the quantity of mail I get, I know what civic accomplishments clubs all over the country are carrying out. We should stop this chip-on-shoulder attitude which forces us to preface our admission that we're buffs with an apology.

Citing the continuing good work of the Friendship boys along this line must not be taken as a blurb for them and them alone. Other clubs are doing equally good work, as frequently reported here. This month's mail brings word from the Central Alarmers, Inc., 1020 Regester Avenue, Baltimore 12, Md., that they've set up a blood bank for paid firemen—all paid brothers, plus their immediate families, can draw upon it. The club's "Monthly Bulletin" (the second issue of this new paper, incidentally) contained a blank form which paid captains of the Baltimore County Fire Department were to fill out listing necessary information about men in their companies who wanted to be donors. Baltimore County district chiefs were to pick up the completed questionnaires and deliver them to headquarters where the list was to be drawn up. Here is another example of a club going deeper than the superficial attendance at big fires.

The Central Alarmers membership is limited to 30 men which means that a call for a particular type of blood might find their eligible members "overdrawn." But the club's membership will now be

"I go for a DRAGON® FIRE PUMP every time!"

Give a fireman a choice and he's sure to go for the Dragon Fire Pump —the one designed from *his* point of view.

Dragon Fire Pumps come *completely assembled*. And because there's no pump packing to dry out, they're always ready for instant action, even after standing idle for long periods. The special harness is not only easy to get into, but designed so the pump rides high where it can't throw the fireman off balance or interfere with walking.

Dragon Fire Pumps fight fire *and* fatigue! Just a few easy strokes of the pump lever gives the operator a *continuous* flow of water he can direct right where it does the most good. And a mere twist of the shut-off nozzle gives either solid stream or spray *instantly*. What's more, a fireman using a Dragon Fire Pump can take his hands off both shut-off nozzle and pump lever to use rake, shovel, or other tool.

Specify Dragon Fire Pumps and get the pump designed with the *firefighter* in mind.

VALUABLE DISTRIBUTORSHIPS AVAILABLE, WRITE TODAY.

Dragon FIRE PUMPS

now available in 2 models

No. 150-S—Stainless Steel Tank

No. 150-G — Galvanized Tank: Cold-rolled steel, hot-dipped galvanized after fabrication.

All units equipped with brass pumps; all tanks seam welded. Capacity 5 gallons

DRAGON FIRE PUMPS meet Underwriters' Laboratories requirements and can be supplied with the UL label of inspection attached.

PARCO PRODUCTS COMPANY

PENNSBURG, PENNSYLVANIA

augmented by the the 300-man paid department. The master list is kept at headquarters for immediate use.

And now for a quick look at the mail!

A. E. Hickerson, manager of the Central Fire Supply, P. O. Box 11, Merriam, Kan., would like to hear from any foreign fire department firemen with the idea in mind of exchanging ideas on equipment, apparatus and methods. Bre'r Hickerson also is maintenance chief of the South Park, Kan., Fire Department, one of five companies in Shawnee Township of Johnson County.

Secretary C. M. Glascow of Local No. 117, Birmingham, Ala., Fire Fighters Association, would like some help from established buff clubs in setting up a Birmingham fan club. Local members have voted to set up a committee to make recommendations toward establishing the club, but they'd like to hear from others. Their address: 1220-27th Street, North, Birmingham 4, Ala.

Another new buff club joins the clan: The Association of Auxiliary Firemen of Manhattan, Inc., 221 East 76th Street, New York 21, N. Y. Officers include: Edward Lavin, president; Edward Loughlin, vice president; Bernard Grandjany, secretary and Thomas Powell, treasurer. The group meets on the first Thursday of every month at the above address and Secretary Grandjany says visiting buffs are always welcome.

Purpose of this new club is to further the interests of the New York City auxiliary fire corps and to cooperate with the New York City Fire Department. They have already applied for International Fire Buffs Association membership and Deacon Grandjany belongs to the New York Third Alarmers.

Until the "long ring" comes in again next month I'll settle back in my captain's chair. The address remains the same: 4234 Don Diablo Drive, Los Angeles 8, Calif. One new addition since we last reported in: Deborah Diane Ditzel, St. Patrick's Day. □□

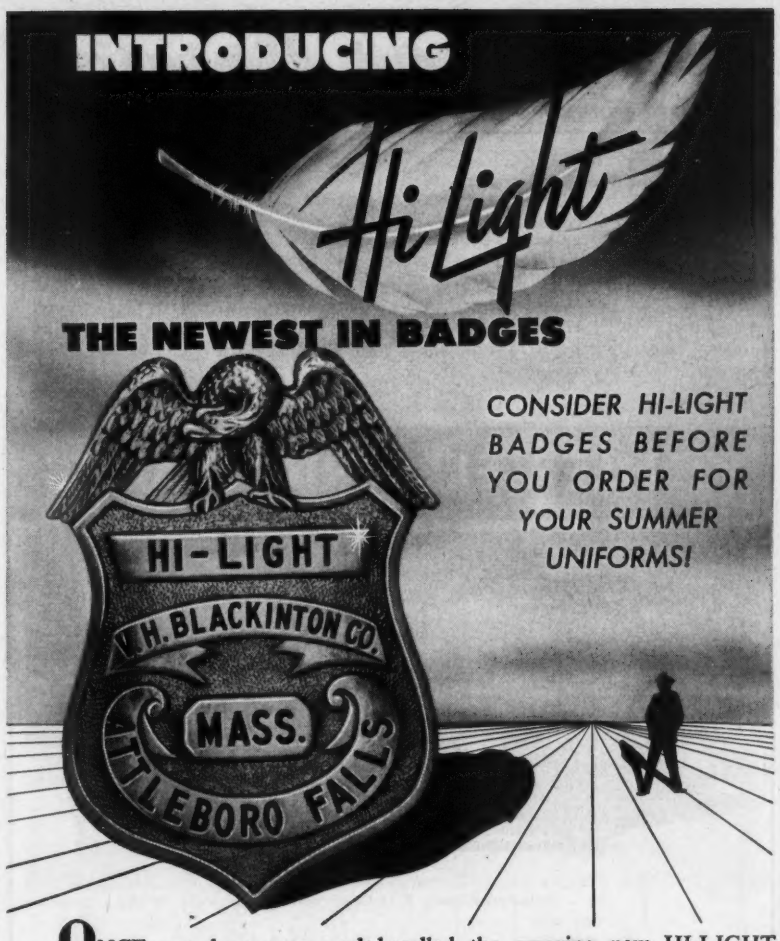
Chicago's New Commissioner Acts

A new training program to qualify each Chicago fireman to give first aid was launched in February by Acting Fire Commissioner Robert J. Quinn.

Two hundred and ten firemen from the department's seven divisions were given a 15-hour course in first aid at the department drill school starting on February 18. They in turn will serve as instructors at the company level.

Dr. Harold P. Sullivan, fire department surgeon presented the course to the instructors.

In another move, Commander Quinn has sent two of his officers, Battalion Chief Frank P. Reilly and Lieutenant James E. Kehoe, on a tour of large cities to study, among other factors, the operation of metal and wood aerial ladders. Chicago adhered to the wood-type ladder even while other cities were discarding it. Among the cities visited were Philadelphia and New York.



ONCE you have seen and handled the amazing new HI-LIGHT metal badge, you'll want no other for your summer wear.

Think of it — a badge that's two thirds lighter than your regular badge, in fact it's so light you hardly know you're wearing it. In spite of its feather light weight, your HI-LIGHT metal badge is durable and it's made with the same high quality deep cut precision die work and gleaming finish that has made BLACKINTON badges famous.

Ask your equipment supplier about the many police and fire badge styles that are now available in the new HI-LIGHT metal.

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Please send me your free and complete information on BLACKINTON badges.

Name.....

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City.....*State*.....

☐ I would like to know more about the new HI-LIGHT metal badges.

V. H. BLACKINTON & CO., 120 Commonwealth Avenue
Attleboro Falls, Massachusetts

Questions and Answers

wherein are answered questions relating to current problems in the fire protection

Discharge from Hydrants

To the Editor:

What is the discharge from a 2½-inch hydrant outlet when the pressure at the outlet is 20 psi?

D. B.

Answer: The formula for determining discharge from a fire hydrant is:

Discharge = $29.7\ D^2\ \sqrt{P} \times 0.90$, where D is the diameter of outlet in inches; P is the pressure measured at the outlet and .90 is the coefficient of discharge.

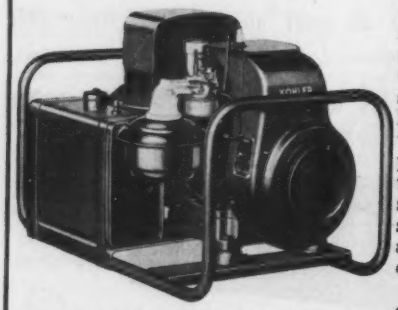
The formula may be further reduced to the following for 2½-inch outlets:

Discharge = $167\ \sqrt{P}$
= $167\ \sqrt{20}$
= 167×4.47
= 746 gpm

KOHLER ELECTRIC PLANTS

Sedgwick County Fire Department rescue truck, Wichita, Kansas.

Portable power—top performance for rescue trucks, fire fighting tools, civil defense



Model 2.5M25, 2500 watts, 115 volt AC. Manual starting.

Smooth-running reliability has made Kohler electric plants the choice for rescue operations and fire fighting equipment the country over. Compact, portable models are used for floodlights, resuscitators, smoke eradicators, portable iron lungs, and power tools. The 2500 watt model shown has 4 receptacles, pilot light, carrying frame. Rubber-tired hand cart available. Other sizes, 500 watts to 50 KW, include stand-by models to maintain sirens, alarm signals, communications, during power failures.

For civil defense, Kohler plants operate floodlights, sound amplifiers, power tools, X-ray units for mobile hospitals. Larger sizes for air-raid sirens. Stand-by models for panic or evacuation centers. Write for folder 8-F.

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Supplying Deluge Nozzle

Question: **An engine is supplying a deluge nozzle equipped with a 1½-inch tip at 80 psi nozzle pressure through three parallel 2½-inch lines each 500 feet long. What is the required engine pressure?**

Answer: First reduce the layout to a single line of 2½-inch hose. The factor for three parallel lines is 7.75.

$500 \div 7.75 = 64.5$

Then find the engine pressure by the formula $E.P. = N.P. \times (1.1 + KL)$, where K for a 1½-inch tip and 2½-inch hose is .505 and L is the number of 50-foot lengths of hose in the line, or 64.5÷50, or 1.29.

Then $E.P. = 80 \times (1.1 + [.505 \times 1.29])$
$= 80 \times (1.1 + .65)$
$= 80 \times 1.75$
$= 140$ psi.

Spontaneous Ignition

Question: **Of the following manufacturing processes, spontaneous ignition would least likely be a hazard in (a) wood manufacturing; (b) plastic manufacturing; (c) paper manufacturing; (d) chemical manufacturing; (e) food manufacturing.**

Answer: According to Chapter 71, Eleventh Edition of the Crosby-Fiske-Forster "Handbook of Fire Protection," the paper and pulp manufacturing industry has the lowest percentage of fires caused by spontaneous ignition in the above group. Therefore (c) would be the correct answer.

Are Fire Chiefs' Drivers an Unnecessary Expense?

To the Editor:

Apparently as an economy measure, the city manager of my city proposes that I dispense with my driver-aide and those of all chief officers and return the men to fire companies. Do you think this is wise? **B. A.**

Answer: The answer is emphatically "no!" The city manager is evidently not familiar with the functions and duties of the driver of a fire chief and he apparently is totally lacking in knowledge of the place and purpose of a fire chief's aide and chauffeur-aide.

Today, in by far the vast majority of cities, the fire chief's driver is more aide than chauffeur. Guiding the fire department's vehicle is the least of his responsibilities.

Which leads to the question: What is an aide to a fire chief? Many fire officers will maintain that the aide is their "right arm" when it comes to fire fighting duties. Those who are honest with themselves, and with their aides, will admit that without their carefully selected helpers, they could well be hamstrung in their fire control efforts.

Not all fire departments delegate to officers' aides the same kind or number of responsibilities, but from studies con-

ducted by this journal the more important and universally delegated duties include:

1. Drive and operate the chief's vehicle.
2. Execute orders and commissions of the officers to whom they are assigned on the fire ground and elsewhere.
3. Handle communications on the fire ground, in inspections, etc.
4. Assist in size-up.
5. Relieve their superiors of small details.
6. Maintain morale and harmony within the chief's command.
7. Represent the chief at meetings and functions.
8. Keep records.
9. Maintain a check on command to see that orders are carried out, by whom, under what conditions and obstacles, etc.

The qualifications for a good driver-aide include the following:

1. He must have a thorough knowledge of firemanship.
2. He must have a thorough knowledge of his fire department.
3. He must know, understand and respect his superior officer.
4. He must be able to accept orders, convey and impart them intelligently.
5. He must be able to keep control of his head, his tongue and his temper under stress of emergencies.
6. He must keep the confidences he is given, or may hear.
7. He must show loyalty to his superior.

Not every fireman, in fact, not even an excellent chauffeur, will make a good aide, but it is often possible to make satisfactory drivers out of men who have all the qualifications of a chief's aide.

It is a known fact that chiefs' aides usually rate higher in examination for promotion. The reasons should be obvious. Their environment, their scope of operations, their broad connections, contacts and the opportunities presented to face up to emergencies of all sorts and to exercise judgment, even command when authority is delegated, makes them better fitted for promotion than the average fire fighter.

A number of cities have attempted to eliminate the chiefs' drivers and/or driver-aides. Cases are on record where because of politics or for some other reason, not only were the chiefs' drivers taken from them, but their official fire department cars were confiscated.

Week-long C.D. Drill Scheduled

Federal Civil Defense officials have announced plans for the fourth annual nationwide disaster drill.

"Operation Alert 1957" will begin 11:00 a.m., Friday, July 12, with the attack period continuing until 6:00 p.m., Sunday, July 14. Following this will be the "Survival Action Period" which ends at noon, Friday, July 19.

The drill is for the purpose of acquainting government and C. D. workers with the problems of nuclear attack.

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Photo Courtesy Wichita Fire Station No. 1

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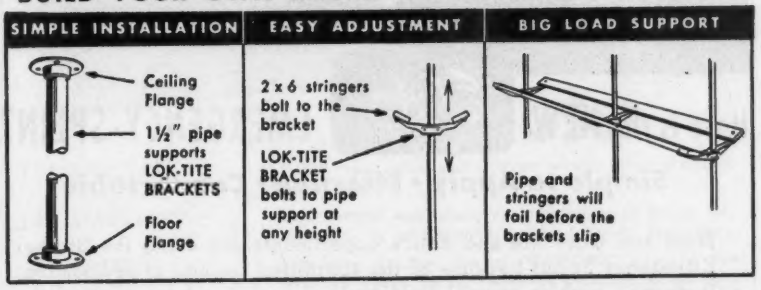
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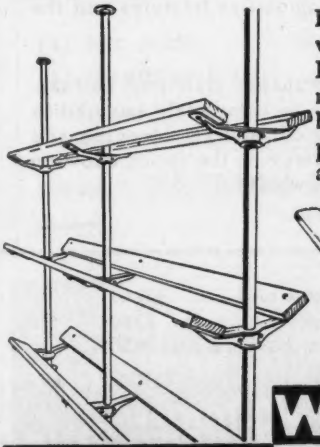

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FIRE COLLEGES

Alabama State Fire College—June 3-7, University of Alabama, University. Director, M. O. Hulsey, Assistant Supervisor, Public Service Training, T & I Education, P. O. Box 1813, University, Ala.

Arizona State Fire Training School—Oct. 17-19, Phoenix. Director, Battalion Chief Jake Siken, Fire Fighting Instruction Supervisor, 49 South First Street, Phoenix, Ariz.

California Fire Service Instructors Workshop—May 13-17, Fresno. **Fire Investigation and Arson Seminar,** June 10-14—University of California, Los Angeles. Director, Thomas S. Ward, Supervisor of Fire Training, State Department of Education, 721 Capitol Avenue, Sacramento, Cal.

Colorado Fire School—June 19-22, Loveland, Colo. Director, A. L. Becker, 2224 S. Stuart Avenue, Denver 2, Colo.

Florida State Fire School. May 21-23—**Liquefied Petroleum Gas Conference.** June 17-21—**Fire Pump Maintenance Course.** Aug. 5-9—**Arson Investigation and Detection Seminar.** Sept. 9-13—**Units 101,** Tools, Forcible Entry, Breathing Apparatus; **107,** Arson Detection; **208,** Fire Department Administration. Sept. 16-20, **Units 102,** Hose and Ladders; **106,** Fire Inspection; **204,** Fire Fighting Tactics. Sept. 23-27, **Units 103,** Rescue, Ventilation, Salvage and Overhaul; **105,** Fire Apparatus and Pumps; **206,** Fire Prevention and Protection. Sept. 30-Oct. 4—**Units 104,** Fire Streams; **201,** Instructor Training; **202,** Company Officer Training. Director, W. H. Barnett, P. O. Box 785, Ocala, Fla.

Georgia State Fire College—May 6-7, Atlanta, Ga. Director, Harry Phillips, 46 Courtland Street, S. E., Atlanta 3, Ga.

Idaho State Fire School—Aug. 15-17, Boise, Ida. Director, Chief Steve Taylor, Fire Headquarters, Boise, Ida.

Illinois State Fire College—June 10-18, University of Illinois, Champaign-Urbana. Director, Robert K. Newton, 116D Illini Hall, Champaign, Ill.

Indiana Fire Department Instructors Conference—June 11-12, Indianapolis Drill School, Indianapolis. **Indiana State Fire School**—Sept. 10-13, Purdue University, Lafayette. Director, Professor Shelby Gallien, Public Safety Institute, Purdue University, West Lafayette, Ind.

International Seminar on Arson Detection and Investigation—April 29-May 3, Purdue University, Lafayette. Director, Professor Shelby Gallien, Public Safety Institute, Division of Adult Education, Purdue University, West Lafayette, Ind.

Iowa State Fire School—June 18-21, Iowa State College, Ames. Director, Keith Royer, Supervisor Firemanship Training, 110 Marston Hall, Iowa State College, Ames, Ia.

Kansas State Fire School—October (tentative), University of Kansas, Lawrence. Director, Clyde A. Babb, 111 Fraser Hall, University of Kansas, Lawrence, Kans.

Kentucky Fire School—June 4-6, University of Kentucky, Lexington, Ky. Director, John L. Thompson, Assistant Manager, Kentucky Inspection Bureau, 940 Starks Building, Louisville 2, Ky.

Maryland Fire College. Pump Operators School—May 17-18, Hale; May 24-25, Waterous; May 31-June 1, American LaFrance; June 7-8, Seagrave; June 14-15, American Marsh. **Fire Service Hydraulics Short Course**—June 27-29. **Annual Short Course for Firemen**—Sept. 3-6. For information, contact Robert C. Byrus, Director, Fire Service Extension, College of Engineering, University of Maryland, College Park, Md.

Maumee Valley Fire School—May 4-5, Upper Sandusky, Ohio. For information, contact Earl Campbell, Box 164, Napoleon, Ohio.

Michigan State Fire College—June 25-28, University of Michigan, Ann Arbor. Director, Francis Hartman, Supervisor, Firemanship Training, 4524 Administration Building, Ann Arbor, Mich.

Minnesota State Fire School—Apr. 22-26, University of Minnesota Farm Campus, St. Paul. Director, Dr. J. O. Christiason, Director of Agricultural Short Courses, University of Minnesota, St. Paul 1, Minn.

Mississippi State Fire School—June 24-28, Mississippi State College, Starksville. Director, J. I. Fetters, Administrative Assistant, University of Missouri, Room 101 Building T-11, Columbia, Mo.

Missouri Fire Conference—July 26-28, University of Missouri, Columbia. Director, J. I. Fetters, Administrative Assistant, University of Missouri, Room 101, Building T-11, Columbia, Mo.

Montana State Firemen's School—Aug. 21-24, Polson. Director, Chief Clayten Brown, Fire Headquarters, Polson, Mont.

Morris County Fire School—April 2, Alexander Hamilton School, Morristown; N. J.; May 7, Lafayette School, Chatham Township, N. J.; June 4, Parsippany-Troy Hills District No. 6 Headquarters; July 2, Rockaway Boro Fire Department Headquarters, Rockaway, N. J.; Aug. 6, Brookside Fire Headquarters, Mendham Township, N. J.; Sept. 3, Cedar Knolls Fire Headquarters, Cedar Knolls, N. J. For information, contact Robert H. Wright, Publicity Chairman, Long Hill Lane, Chatham, N. J.

Nebraska State Fire School—May 5-7, Grand Island. Director, Otto B. Johannes, 2604—12th Street, Columbus, Neb.

New Jersey State Fire College. Spring lecture session: May 1, Newark. Fall outdoor training sessions—Sept. 12-15 (tentative), Sea Girt. Director, Deputy Chief (ret.) John P. Weeks, 804 Quackenbush Boulevard, Sea Girt, N. J.

New Mexico Fire Marshals Fire Protection Conference—Aug. 21-23, Roswell; Aug. 25-27, Las Vegas. Director, John B. Woodall, Deputy Fire Marshall, P. O. Box 311, Santa Fe, N. M.

New York State Fire Instructors Conference—May 20-24, Plattsburg. For information, contact Michael H. Prendergast, Director, New York State Division of Safety, 17 Elk Street, Albany 7, N. Y.

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Northeastern Pennsylvania Volunteer Firemen's Federation Fire School—June 8-9, Dalton, Pa. For information, contact James H. Oakey, Fire School Director, Dickson City, Pa.

Ohio State Fire School—Sept. 9-13, Ohio State University Campus, Columbus, Ohio. Director, Dr. Harvey Walker, Department of Political Science, Ohio State University, Columbus. Co-Director, Wayne C. Jenkins, Chief of Fire Prevention, State Fire Marshal's Office, Wyandotte Building, Columbus, Ohio.

Pennsylvania State Fire School—Apr. 29-Oct. 4, three seven-week cycles of fire fighter training. **AEC Course in Atomic Energy Fire Hazards**—Apr. 30-May 2. **Annual Fire School and Instructors' Conference**—Aug. 5-10. **Officership and Instructors Finishing Course**—Aug. 12-16, all at Pennsylvania Fire School, Lewistown, Pa. For information, contact Art Espey, Director, Box 631, Lewistown, Pa.

South Dakota State Fire School—June 3-7, Mitchell. School Chairman, Robert Hanigan, Secretary, State Volunteer Firemen's Association, Box 423, Pierre, S. D.

Suffolk County Fire Chiefs' Council Annual Field Conference—May 26, Suffolk Air Force Base, Westhampton, L. I., N. Y. For further information, contact Ernest G. Wilcox, P. O. Box 125, Smithtown, N. Y.

Tennessee State Fire Service School—Aug. 19-23, Middle Tennessee State College, Murfreesboro. Director, Homer S. Elkins, Firemanship Instructor, T & I Division, State Board for Vocational Education, 215 Chestnut Street, Chattanooga, Tenn.

Texas Firemen's State Training School—July 21-26, Texas A & M College, College Station. Director, Henry D. Smith, Chief, Firemen's Training School, Engineering Extension Service, A & M College, College Station, Tex.

Virginia Firemen's School—June 24-28, Williamsburg. For information, contact Robert B. Smith, Assistant Marshal, Williamsburg Fire Department, Williamsburg, Va.

Virginia State Fire School—Sept. 9-13, No. 9 Station, Thole Street, Norfolk. Director, R. Lawrence Oliver, Supervisor-Instructor, Fire Service Training, P. O. Box 654, Harrisonburg, Va.

Washington Annual State Firemen's School—July 11-12, Spokane. Director, J. R. Cook, State Firemen's Association, 200 Fifteenth Avenue, Seattle 2, Wash.

West Virginia State Fire School—July 22-26, West Virginia University, Morgantown. Director, R. E. Hanna, Jr., Department of Extension of Industrial Science, School of Mines, West Virginia University, Morgantown, W. Va.

Western Pennsylvania Firemen's Training Institute—Aug. 19-23, State Teachers College, California, Pa. For information, contact James Silbaugh, Secretary, Fire School Committee, Uniontown, Pa.

Coming Events

May 20-24—**National Fire Protection Association.** Annual meeting, Los Angeles, Cal. General Manager, Percy Bugbee, National Fire Protection Association, 60 Batterymarch Street, Boston 10, Mass.

June 3-5—**Eastern Association of Fire Chiefs.** Annual meeting, Baltimore, Md. Secretary, Chief Edwin J. Clark, Box 328, Wayne, Pa.

June 6-8—**Montana State Fire Chiefs Association.** Annual meeting, Lewistown, Mont. Secretary-Treasurer, William S. Hayes, 312-1st Avenue North, Great Falls, Mont.

June 14-16—**Michigan State Firemen's Association.** Annual convention and fire school, Clare, Mich. Secretary-Treasurer, Stirling Garrow, 816 Oak Street, Port Huron, Mich.

June 9-12—**New York State Fire Chiefs Association.** Annual meeting, Elmira, N. Y. Secretary, Ward A. Bohner, Fire Coordinator Oneida County, c/o Fire Headquarters, Utica, N. Y.

June 16-19—**Oregon Fire Chiefs Association and Rural Fire Districts Association.** Joint conference, Coos Bay, Ore. For further information, contact Chief Francis X. Mulvey, P. O. Box 218, Coos Bay, Ore.

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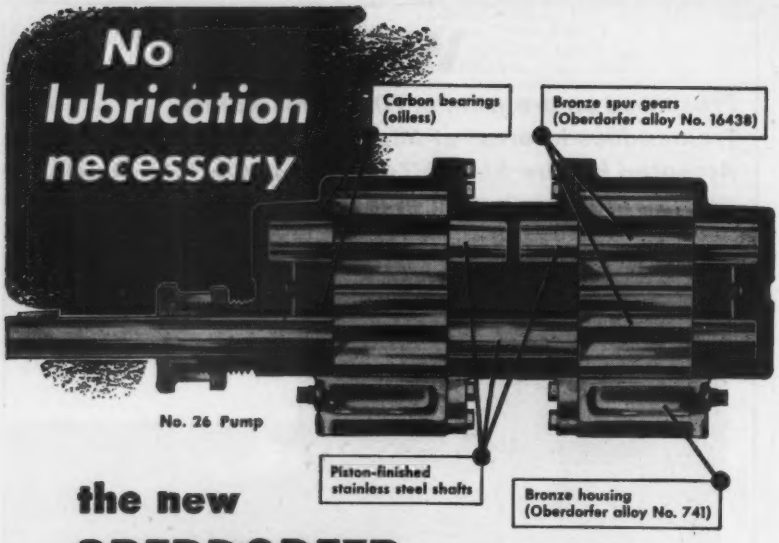
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13	1600	120	500'—1½"	20'	75

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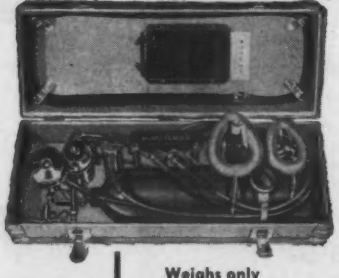

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Coming Events

June 19—**Northwestern Ohio Volunteer Firemen's Association.** Annual meeting, Bryan, Ohio. Secretary, Earl Campbell, Box 164, Napoleon, Ohio.

June 19-21—**Colorado State Firemen's Association. Fortieth Anniversary,** Convention, Tournament and Fire Schol, Loveland, Colo. Secretary, Arthur J. Becker, 2224 South Stuart Street, Denver 19, Colo.

June 19-22—**Arizona State Firemen's Association.** Annual meeting, Prescott, Ariz. For information, contact Chief Jack Custer, Fire Headquarters, Prescott, Ariz.

June 20-22—**Hudson Valley Volunteer Firemen's Association.** Annual meeting, Beacon, N. Y. For information, contact Ervin Stehr, Chairman, House Committee, 17 Van Ness Road, Beacon, N. Y.

June 21-22—**Iowa Association of Fire Fighters.** Annual meeting, Council Bluffs, Iowa. For information, contact D. A. Baxley, Convention Co-Chairman, Fire Station No. 2, Council Bluffs, Ia.

June 23-26—**New England Association of Fire Chiefs.** Annual meeting, Wentworth-by-the-Sea, Portsmouth, N. H. Secretary-Treasurer, John W. O'Hearn, 206 Mt. Auburn Street, Watertown 72, Mass.

June 27-29—**International Fire Buff Associates, Inc.** Annual meeting, Cincinnati, Ohio. For information, write Robert Wren, 3430 Saybrook Avenue, Cincinnati, Ohio.

July 8-9—**Southeastern Association of Fire Chiefs.** Annual meeting, Nashville, Tenn. Secretary-Treasurer, Chief G. A. Mitchell, Fire Headquarters, Opelika, Ala.

July 16-19—**Pacific Coast Inter-Mountain Association of Fire Chiefs.** Annual meeting, Portland, Ore. Secretary-Treasurer, Jay W. Stevens, 1014 Merchants Exchange Building, San Francisco 4, Cal.

Aug. 17-24—**Macomb County Firemen's Association.** Annual regional fire school, Mount Clemens, Mich. For information contact Fire Marshal Walter O. Jacobs, St. Claire Shores Fire Department, St. Clair Shores, Mich.

Aug. 18-23—**Firemen's Association of the State of New York.** Annual meeting, Elmira, N. Y. For information contact the headquarters of the Association, Hotel Martinique, Broadway at 32nd Street, New York 1, N. Y.

Sept. 8—**Great Lakes Association of Fire Chiefs.** Annual meeting in conjunction with International Association of Fire Chiefs, New Orleans, La. Secretary, Elmer Stough, 605 Fourth Street, Lorain, Ohio.

Sept. 8—**Southwestern Association of Fire Chiefs.** Annual meeting in conjunction with International Association of Fire Chiefs, New Orleans, La. Secretary-Treasurer, Dr. B. J. Barrodale, 275 Gabasse Street, Houma, La.

Sept. 8-12—**International Association of Fire Chiefs.** Annual meeting, New Orleans, La. Secretary-Manager, B. Richter Townsend, Suite 1306, 232 Madison Avenue, New York 16, N. Y.

Sept. 12-14—**West Virginia State Firemen's Association.** Annual meeting, McMechen, W. Va. For information contact Edgar Gallagher, Convention Chairman, McMechen Volunteer Fire Department, McMechen, W. Va.

Sept. 12-14—**Westchester County Volunteer Firemen's Association.** Annual meeting, Briarcliff Manor, N. Y. For information, contact John R. Bailey, Secretary, Box 1, Baldwin Place, N. Y.

Sept. 16-19—**Canadian Association of Fire Chiefs.** Annual meeting, Kentville, N. S. Secretary, Chief Allan H. Clark, Fire Headquarters, Lakefield, Ont.

Sept. 22-26—**California State Firemen's Association, Inc.** Annual meeting, San Mateo, Cal. For information, contact E. L. Albrecht, Sr., Secretary-Treasurer, 755 - 17th Street, San Bernardino, Cal.

Oct. 31-Nov. 2—**International Rescue and First Aid Society.** Annual meeting, Sheraton-Ten Eyck, Albany, N. Y. Executive Secretary, Max L. Spray, 101 North Alfred Street, Alexandria, Va.

VOLUNTEER INSPECTIONS

Continued from page 325

It should be borne in mind at all times that such inspections must be by invitation of the owners; firemen (except in one state) have no legal right to enter upon the premises of the homeowner except by permission. It is therefore important the firemen making such inspections conduct themselves with the utmost propriety in all their contacts with residents. Only in this manner will the confidence of the public be gained, and the safety recommendations of the fire department accepted and followed.

The lack of interest in such residential inspections by the homeowners themselves is something that has discouraged many fire chiefs. Stimulating the interest of the "consumers" usually requires real effort and ingenuity on the part of the fire department.

One fire department reported to FIRE ENGINEERING that some years ago several lives were lost in a flash fire involving a new ranch-style home in a real estate development. Immediately after this occurence so many requests for home inspections were received from this development that it was difficult to keep up with them. As the days passed, the tragedy was forgotten and the requests for home inspections fell off accordingly, dropping in about one year to practically nothing.

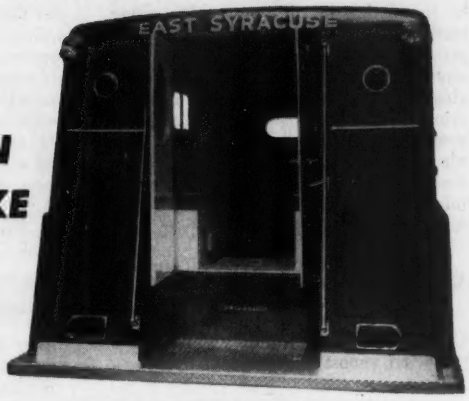
As the inspection invitations declined, the fire department concentrated its efforts on the school children with the object of reaching the parents through them. As soon as this new approach was felt it was noticed that calls for residential inspections turned upward.

Conducting a campaign

A residential inspection drive may be waged in conjunction with the regular mercantile and industrial inspection effort, or it may be made a special project. This selective or "target" campaign appeals to most departments because it finds greater acceptance by the public. With a little added effort, municipal authorities, service clubs, church organizations and other interested groups can be enlisted in the program and induced to cooperate in interesting and "selling" the idea to the local citizens.

Fire department plans should include the designation of the inspectors; the best time for making calls, and the procedures to be followed in conducting the inspections. Another important consideration is the "followup." In many cases, the use of two-man teams is found very satisfactory. In some areas one man inspects the exterior while the second man goes through the interior. The most popular method seems to be where the men operate together with one pointing out the hazards to the householder while the other makes notes for a later report to headquarters.

A report system should be set up to record and tabulate inspections. A system of filing should be instituted in order to preserve the data for future use. It will



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be found that in addition to eliminating immediate fire hazards, a good inspection program affords firemen access to information on hazardous conditions, obtainable in no other way. Where invalids, cripples or other persons requiring assistance are found, inspections will enable the department to prepare plans for their rescue in case of fire. This advance information multiplies the opportunities for saving life.

Case of Nassau County

Nassau County, adjacent to New York City, is a heavily populated area. It is protected almost 100 per cent by volunteer fire departments. Excellent codes and ordinances covering fire safety are closely supervised by a county fire marshal and a County Fire Commission. To fully administer the codes and keep current with inspections would be an overwhelming task for the fire marshal's office without the assistance of the local fire departments. How that cooperation is afforded may be taken from the report of the Merrick Fire Department, headed by Chief Frank Larson.

Inspectors are hand picked

The inspection duties for the Merrick fire district are the responsibility of the second deputy chief, Fred Dauerheim. Under him is a staff of 15 inspectors, all members of the department. Before becoming inspectors the men are given a course of instruction prepared by County Fire Marshal George Clough and taught by the Fire Training Division of the County Vocational Education Department. Upon completion of the ten-week course the candidates are examined by the County Fire Commission and if found qualified are appointed "assistant county fire inspectors," with jurisdiction only in their respective fire districts. In order to give the local fire chief a measure of control over these men, he selects the original candidates for training and each year certifies to the county commission the names of those inspectors he believes are qualified to continue in the program. Unless this certification is received by the commission the men are dropped from the rolls.

The inspectors follow regulations outlined in a guide manual supplied by the fire marshal and the county fire code. Inspectors wear uniforms and carry identification cards.

The town is divided into four sections which are covered at least once a year, and more frequently as necessitated. Inspections are made during the evening, on Saturdays, or on the inspectors' days-off if they occur during the week. Theatre inspections are usually made on Sunday mornings. In the matter of residential inspections, appointments are made when necessary, with the persons concerned and only upon request.

Ohio experience outstanding

In some areas of the country a definite program is being promoted by the many fire prevention groups, insurance companies, fire marshals, rating organizations and firemen's associations. This program is very popular in Ohio, West Virginia, Pennsylvania, North Carolina and Virginia.

The Ohio plan consists of monthly inspection projects designed to provide continuous inspections and to gain favorable publicity by telling the story of fire prevention to the residents of the areas concerned. The results of this program clearly emphasize the value of concentrated effort, as the following attests:

The Ohio State Rural Fire Safety Inspection Program was initiated in 1953 by the then fire marshal, Charles R. Scott. It has been adopted by 250 volunteer fire departments that protect 275 of the 1,305 townships in the state. In each of these governmental subdivisions are an average of 325 rural properties.

At the 1957 Fire Department Instructors Conference in Memphis, Tenn., Wayne C. Jenkins, chief of the Fire Prevention Bureau, Division of the Ohio State Fire Marshal, presented the following information on the results of the program for the years 1954, 1955 and 1956.

A total of 89,000 residential inspections have been made. In every case, individual fire departments have reported substantial decreases in the number of alarms received and a parallel drop in rural fire losses. The total number of

"THE COMMANDO"

Bring on your toughest jobs... this rugged light is ready to go!

Thanks to built-in quality in every detail, "The Commando" can take all the punishment your department can dish out. And you can depend on this stainless steel construction to keep its trim good looks through years of service in all kinds of weather.

Look at these important features: Combination handle-shoulder sling for fast, easy action. Heavy-gauge lens guard with rubber bumper. Non-scratch lens. Water-proof battery that gives 5 hours of continuous use. Trouble-free switch. Built-in compartment for spare bulb. Reflective "Scotchlite" jacket (optional).

No wonder the dry-cell "Commando" is economical for any department and *ideal* for the volunteer. It's really power-packed, too — weighs only 67 ounces, but delivers a brilliant half-mile beam! Find out more about this partner of the famous Wheat Rechargeable Spotlight. Both are dependable products of Koehler — quality name in portable lighting for over 40 years.

For information, write to Department K

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rural fires reported in Ohio during 1955 was 2,758 with a loss of $11,162,331. In 1956, 2,333 fires with a loss of $9,751,201 were logged. The reduction of 425 fires and $1,401,130 loss represent substantial savings attributed to this program.

Brookside alarms drop to zero

The Brookside Volunteer Fire Department, located in Belmont County, Ohio, protects a village of 800 people and a rural township of some 300 families. Prior to the institution of the safety program, the department received an average of 12 fire calls per year. Immediately after the inspections were begun, a drop in the number of alarms received was noted and in the past two years not a single fire call has been received by the department.

Another bit of evidence: Ashland County, Ohio, is protected by eight fire departments. The inspection program was begun by seven with the following results: In 1954 a total of 44 alarms were received by all departments; in 1955, 34 calls were answered; in 1956, the number of alarms dropped to 31.

Similar results have been reported by Trumbull County, Ohio, where 26 volunteer fire departments are in operation. The program is carried on by nine of these organizations and the statistics again show substantial reductions: During 1954, 206 fire calls were answered; in 1955, 154 alarms; and in 1956, 137 responses were made in the county.

Summary

The history of successful fire inspection programs include most, if not all, of these fundamentals:

Legal—Fire prevention codes are essential for best results.

Coordination—An inspection campaign must include all members of the department and should be coordinated with community authorities, service clubs and related organizations.

Training—For effective results all personnel must be trained in correct inspection methods.

Reporting—Reports must be tabulated and filed in order that an evaluation of the program's effectiveness may be made.

Analyzing—The information gained by this inspection work will be of untold benefit to fire fighters in planning fire protection strategy.

Target—Inspections of all risks are necessary but the greatest effort should be centered on the householder as the target. □□

To Study Civil Defense

A 25-man committee to study the country's civil defense needs was formed March 16 at the final session of the National Military-Industrial Conference in Chicago.

Robert E. Wood, of Chicago, retired chairman of Sears, Roebuck & Co., was named to head the group.

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We are at present fabricating this long shank-plus-clamps coupling, but . . . what we prefer to make is our own design, Bar-Way #117-D (See Below).

Both are for the same hose, same service, but . . .

The #117-D is 55% shorter, 10% lighter, is non-snagging and

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Minimum specifications require priming on a 10 ft. lift in 30 seconds. A substantial reserve on all HALE products is a consistent HALE policy.

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CONTROL VENTILATION
...CONTROL FIRES!
The heart of the SUPER VACUUM Smoke Ejector is the patented propeller. Conventional fans produce a chopping, recirculating action. In contrast, the SUPER VACUUM propeller is a perfect spiral air screw which creates a vacuum... suction is created over the entire face of the propeller and the air or smoke is discharged in a high velocity spiral. There are no dead spots.
THE HEART OF THE SUPER VACUUM
WRITE FOR ADDITIONAL INFORMATION OR CONTACT YOUR LOCAL FIRE EQUIPMENT DEALER
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Our Readers Write Us

Church Editorial Acclaimed

To the Editor:

Mr. Alfred J. Gorand, Coordinator of Safety for the Sun Oil Company, has brought to my attention your excellent editorial in the February 1957 issue of FIRE ENGINEERING.

May I have your permission to reprint this editorial so that it can be mailed to the priests of the Archdiocese of Philadelphia? I have been urging regular inspections to insure greater degree of safety in our parish buildings, and your timely and forceful plea will strengthen my own.

John F. O'Hara, C.S.C.
Archbishop of Philadelphia

Editor's Note: Following permission, which of course, was granted, Archbishop O'Hara sent reprints to the entire parish, with the following personal message:

"The enclosed editorial from the magazine Fire Engineering, is placed in your hands for information and advice—and for action as well if you are a pastor or in charge of a building. Even those priests who have no direct responsibility in the matter have obligations of charity toward their fellow priests, and they may help them with advice and counsel if they detect a fire hazard that has been missed by someone else.

"Those who have the direct responsibility should have periodic inspections made by the local fire department—at least two inspections a year. The inspection should cover all the parish property, not simply the church. Our concern must cover not only the physical plant, but the safety of those who use the parish buildings. In the schools especially, storage space must be examined carefully and all inflammable material removed. There must be similar vigilance over oil mops which may give rise to spontaneous combustion."

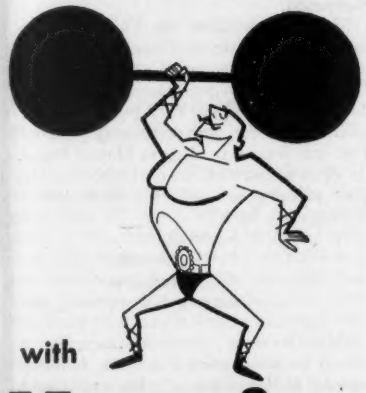
To the Editor:

I have read your very timely editorial in the February issue of FIRE ENGINEERING covering the trend and record of our nation's church fires.

It was interesting, very much to the point—my only criticism being that it failed to evolve a practical method of combatting this continuously rising trend in church fires.

I feel that this editorial should be reprinted exactly as produced in the magazine with the back left blank and that copies be made available to every fire chief in every city and village and they be mailed by the chiefs to every church in their territories. This could have a covering letter from the chief explaining the dangerous trend and asking immediate cooperation in seeing that every church is made as safe as possible. This could best be accomplished by a cooperative inspection by the minister, the

Easy Does It!



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maintenance men, the head of the church organization and others vitally concerned and, of course, the fire chief.

This would actually produce a two-way punch at this type fire and with all of us activated for a drive on church fires for one month I believe and know that it would have tremendous effect on getting churches back into the "normal fire" column.

Olaf Sorenson, Chief
Park Forest, Ill.

To the Editor:

Your editorial and article "Church Fires Show Alarming Increase as New Year Opens" in the February 1957 issue of FIRE ENGINEERING is very timely, and I believe should be made available to church boards of trustees in all cities.

James Kane
Second Assistant Chief
Pasadena, Cal.

To the Editor:

We have noted with great interest your editorial in the February, 1957 issue of FIRE ENGINEERING entitled a "Calamity and a Disgrace," pertaining to the high number of fires in churches. . . . We would like to have permission to reprint this editorial.

Falcon Alarm Company, Inc.
Summit, N. J.

To the Editor:

In the February FIRE ENGINEERING you had a very interesting editorial, "A Calamity and a Disgrace." It so happened that a few days after receiving our copy of that issue, we were asked to give a fire prevention talk to the ministers of our city. . . . Will you please give us the cost of reprints?

Calvin Roberts, Chief
Livonia, Mich.

Advertising saves a life

To the Editor:

One day last November two teenagers were duck hunting near Thibodaux, La. One boy accidently shot the other through the right side. The injured boy was taken to St. Joseph's Hospital, Thibodaux, in a critical condition.

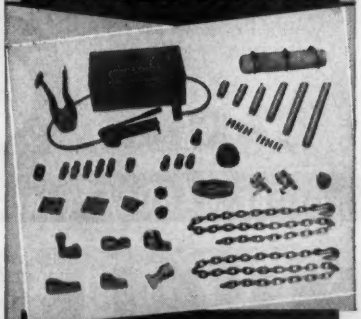
Following an operation and six weeks recuperation he was allowed to go home. After two days he developed severe respiratory failure and on January 7, he was rushed back to the hospital where it was necessary to perform a tracheotomy, insert a tube, and attempt to get oxygen into the lungs.

In spite of these methods the boy was turning blue due to insufficient aeration of the blood. Councilman Bertrand F. Hebert, trustee of public property for the city, was informed of the situation by the fire department.

Councilman Hebert recalled having seen an advertisement in FIRE ENGINEERING concerning "Batronics" or electronic resuscitators manufactured by us. He notified Mayor Leonard J. Toups and had him contact our representative in New Orleans. Between them, they arranged to

THIS FREE BULLETIN shows you . . .

. . . HOW THIS NEW P-F Hydraulic RESCUE KIT . . .



. . . uses 7½ TONS of HYDRAULIC POWER to FREE TRAPPED VICTIMS FASTER!

READ WHY the P-F RESCUE KIT gives you all the power, speed and versatility for FAST, SURE RESCUE.

READ HOW the P-F 7½ Ton, Remote-Control Jack and All-Position Ram, Speedlok Tubing and Versatile Attachments, including the exclusive Bite-Tite Pull Clamps, Cleated Push Base and Spreader, fit all rescue situations.

Before purchasing any Rescue Equipment send for your FREE copy of this informative bulletin.

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Here is the suit that really gives you—3 suits in 1—a tough, water-repellent cotton duck outside to take rough service—a 100% Du Pont Neoprene interlining, completely waterproof—and a comfortable, warm, dry lining, light for warm climes, heavier for cold. Worn by firemen the world over.

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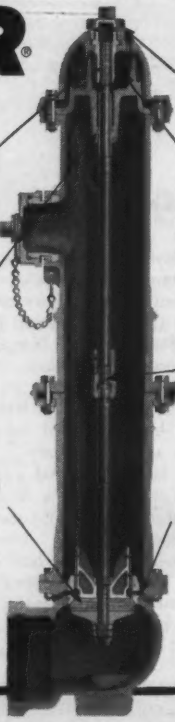
for perpetual readiness!



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Self-oiling reservoir automatically lubricates stem threads when hydrant is operated.

Dry top design keeps threads and bearing surfaces away from moisture.

"O" ring seals around stem eliminate maintenance of stuffing boxes and glands.

Safety stem coupling and flange prevent damage to stem and barrel by traffic collision.

Compression-type main valve closes with pressure – assures positive shut-offs.

Double drain valves automatically flushed when valve is opened – a positive drain.

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Since 1857

have the distributor speed one of the units from New Orleans to Thibodaux by State Police. The trip of 60 miles was made in about 45 minutes. After 15 minutes of the electronic device the boy was out of danger as far as his breathing was concerned.

This one incident in Thibodaux resulted in the sale of three Batronic resuscitators in this small city of 15,000. The Rotary Club purchased one unit for the hospital, and the City purchased one each for the fire and police departments. This was done according to Mayor Toups, "to offer to the citizens of Thibodaux the most modern and effective protection it is possible to have."

Sincerely,
F. W. Scoville
Sales Manager,
Batrow Laboratories, Inc.

Editor's note: Fire Engineering is proud to have played a part, however remote, in the saving of a life under such emergency conditions.

It Did Happen Here!

To the Editor:

While reading the January issue of FIRE ENGINEERING, I observed the cartoon on Page 54. This really struck home as a similar situation actually happened here.

On December 3, 1956, the Civil Service Commission was holding examinations for "Engineer." Part of the test consisted of driving and operating a pumper.

One of the "hopefuls," in backing the apparatus into the station, plowed into a corner of the City Hall and Fire Headquarters. Beside leaving a deep gouge for remembrance and destroying a 35-foot aluminum ladder and its brackets, the accident shook the building from top to bottom, sending city employees to the nearest exit. The applicant then left the pumper in the middle of the street and took off for destinations unknown.

As a result of the excitement, a local police officer wrote the following poem which just about tells the complete story.

Examination Day

T'was Examination Day
For the Department of Fire,
To pass the exam
Was each man's desire.
They huddled in groups
In a nervous stew
And swapped what little
Information they knew.
Then each took the truck
And gave it their all;
One eager beaver
Clobbered the City Hall.
Fred Kelterer sweated,
He stewed and he swore;
When his ladders got crushed
His pants he tore.
The exams were finally over
And all sighed in relief.
When they posted the results
Bob Borton was chief!!!!

I am sure you will be happy to know that sometime in the near future, the

City of Hermosa Beach will submit to the people a bond issue for a new city hall, fire station, police station and library.

Thank you for a good laugh from your cartoon.

Sincerely,
Fred B. Kelterer, Chief
Hermosa Beach, Cal.

Kansas City Underwriters Patrol Disbanded

The history of the Kansas City, Mo., Salvage Patrol is tied in with the fire protection of the city and the public spirit of its inhabitants. The patrol was originally started by the city in 1889 and was maintained by license fees collected from the insurance companies. In 1903 this fund was insufficient to maintain the operation and the city planned to disband the patrol. However, Mayor Reed, later U. S. Senator, proposed that the insurance companies through their agents, operate the service. The proposition was accepted and the Kansas City Insurance Agents' Association was incorporated under Missouri State Law in September 1903, for a term of 30 years.

William H. Gardner, the Patrol's last chief

In 1933, the Underwriters' Fire Patrol, Inc. was formed and granted a 30-year franchise for the operation of the salvage patrol. It is interesting to note that the unit was organized under a very general state law which governs benevolent, religious, scientific, educational and miscellaneous associations; there is no specific state law governing salvage patrols.

For 67 years the patrol served the city, answering every alarm north of 27th Street and west of Troost Avenue on the south side of the Missouri River. Patrol 2 was added on January 17, 1891, and moved into a new building on February 1, 1896, where it remained until May 1, 1938. At the peak of operations, three units were in service although in recent years this was reduced to a single station housing two companies.

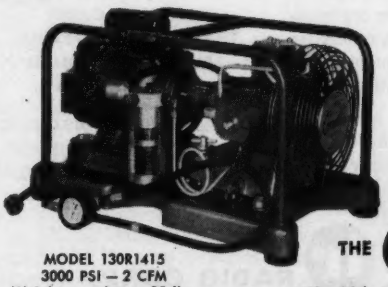
The initial chief of the patrol was J. F. Pelletier. His report for the year ending December 31, 1911, states, "The

From one chief to another . . .

CHIEF LUKE J. BERGAN, AUBURN, N. Y., SAYS:

"I would recommend the Cornelius Air Compressor to all Fire Departments using demand masks"

Chief Bergan adds: *"The Cornelius Air Compressor is all that it is advertised and we are very pleased with it. Before purchasing one we had to send away for refills and wait several days for return of the cylinders. Now when our tanks are used, sometimes not entirely empty, we refill them and they are always ready."*



MODEL 130R1415
3000 PSI — 2 CFM
Weight complete — 95 lbs.

There is no substitute for an abundance of pure, fresh air for prompt, effective fire fighting. Write today for FREE Cornelius portable compressor catalog or call your fire equipment distributor for a demonstration. Find out why Cornelius compressors are recommended by fire chiefs everywhere.

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HOSE CONDITIONING EQUIPMENT
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The patented, electrically operated Circul-Air hose dryer circulates prewarmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life. No other drying method is so fast — so economical — so easy to use. Circul-Air is the preferred drying method in over 4,000 leading Fire Departments.

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ROTO-JET Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple one man operation. With or without detergents, ashes, dirt, mud and sludge are automatically scrubbed out and flushed away. Saves time. Lengthens hose life.

Now . . . with Foot Pedal Operation.
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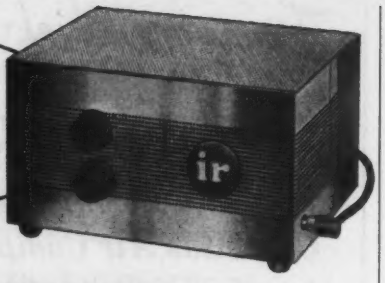

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ONLY $99.00 (less crystal)

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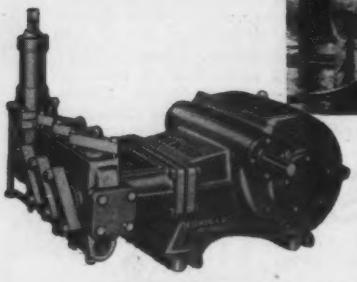

Some fires can be brought under control more quickly with a cooling fog spray than with a high volume stream.

Many manufacturers of today's fire-fighting equipment install a Myers Bulldozer Fire Pump to provide the dependable high pressure required to produce effective fog.

Write today for an illustrated catalog of the complete line of Myers Bulldozer Fire Pumps.

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PUMPS
Water Systems and Water Softeners

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Superintendent's buggy and the large service wagon at headquarters have been discarded and replaced by the latest and most improved automobile cars of special design . . . these machines have more than paid for themselves by the excess saving made at . . . fires."

About August 1912, an automobile apparatus was placed in Company 2 to fully motorize the patrol, making it the first such patrol organization in the nation to completely discard the horse.

Other heads of the patrol, which won fame from coast to coast for its record of operating without ever losing a man in an accident, were, in addition to John F. Pelletier who served from May 10, 1889, until his death on January 3, 1918: Joseph E. McCormick, who was in charge from January 7, 1918, until his death, March 23, 1918; John C. Egner, whose term ran from March 28, 1918, until his retirement October 20, 1930, and William H. Gardner who headed the patrol from October 20, 1930 until January 1, 1957, when he retired at the time of the final closing of the unit.

With the passage of a city ordinance on December 31, 1956, all fire patrol lands, buildings, equipment, apparatus and other property were acquired by the City of Kansas City. The functions of the patrol were assumed and consolidated with the Kansas City Fire Department under the jurisdiction of Edgar M. Grass, director and fire chief, as of January 1, 1957. Of the 16 members of the patrol remaining at its closing, four joined the Kansas City Fire Department and the remaining 12 found employment elsewhere or retired. One member is now with the National Board.

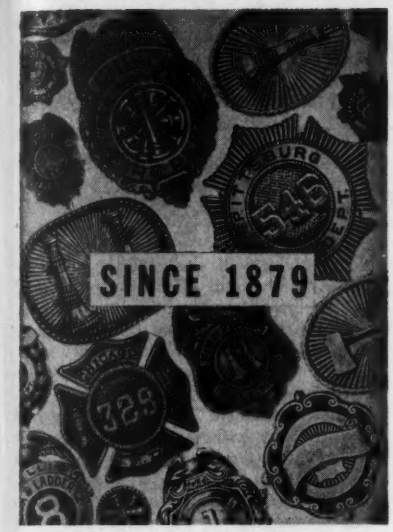
The curtain was finally lowered with a testimonial farewell luncheon for the patrol on March 12 at the Advertising and Sales Executive Club. Boyd A. Hartley, engineer with the National Board of Fire Underwriters was the speaker for the occasion. He reviewed the long and honorable history of the patrol and traced the history of the salvage movement from the time of its birth in England. There are now only eight Underwriters' salvage patrols remaining in the nation. These include New York City; Chicago, Ill.; Philadelphia, Pa.; Baltimore, Md.; Worcester, Mass.; Boston, Mass.; Cincinnati, Ohio, and Albany, N. Y. □□

New Atom Fuel For Aircraft

A new non-petroleum fuel may double the range of jet aircraft and rocket missiles. Called HiCal, the fuel combines boron, carbon and hydrogen to harness the intense heat of hydrogen combustion.

Potential benefits of HiCal include reduction of the need for in-flight refueling of jet aircraft and extension of the area covered by carrier-based aircraft and guided missiles, according to Dr. Morton Klein, who supervised development of the fuel at the Armour Research Foundation, Illinois Institute of Technology.

The research has given such promise that the Navy has authorized construction of a $38 million plant to produce HiCal near Muskogee, Okla.



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New York 17, New York

Annual Virginia Firemen's School

The Williamsburg Fire Department has announced the dates for the Second Annual Virginia Firemen's School to be held at Williamsburg's Fire Research and Training Center. The five-day school will start on June 24 and end on the 28th. Classes of four-hour duration, emphasizing "learning by doing" will be held on twelve subjects: 1) Hose and Ladder Techniques; 2) Extinguishment of Building Fires; 3) Use of Breathing Equipment; 4) Employment of Fire Service Tools and Forcible Entry Equipment; 5) Extinguishment of Flammable Liquid Fires; 6) Basic Salvage Methods; 7) Brush and Forest Fire Tactics; 8) Fuel Transportation Problems and Fire Fighting Techniques; 9) Arson Detection; 10) Ventilation Methods; 11) Fire Behavior; and 12) Hydraulics and Friction Loss Problems.

The school's program is aimed at reaching volunteer and paid members of rural and small city fire departments. The cost to each fireman for all expenses while attending the school is only $20. This very reasonable expense is made possible through the cooperation of the College of William and Mary, which make available dormitory and dining hall facilities to the enrollees.

The Williamsburg Fire Department's Research and Training Grounds include a two-story building specially constructed for interior fires; a four-story training tower; a 1200 square foot flammable liquid burning pit; a tanker-truck for flammable liquid fires; a smoke house for use of breathing apparatus; tool and forcible entry panels; and a class room building. All of these facilities, along with those of the College of William and Mary will be available to the enrollees at the school.

Freak Weather a Boon

A freak snowstorm and icy weather helped avert a major disaster in the Newhall area north of Los Angeles January 28 when an 8-inch oil pipeline broke spilling 22,500 gallons of highly volatile oil over eight square blocks.

Officials of the General Petroleum Co. raised the alarm at 6:10 p.m. when instruments detected the break in the line between the Newhall pumping station and the plant in Vernon.

Four Los Angeles County Fire Department companies under Battalion Chief Paul Clark sped to the scene, along with company workers and deputy sheriffs. Fifty homes were temporarily evacuated as the oil spread rapidly toward a nearby Standard Oil Co. high octane distributing station.

Hose lines were used to wash down streets and sand was also spread.

Chief Clark said that if the weather had not been near freezing, any small spark could have ignited the entire lake of oil. In the summer, Newhall is hot and dry with temperatures passing 100 degrees.

—Cliff Dektar

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No. 150 High Intensity Flood
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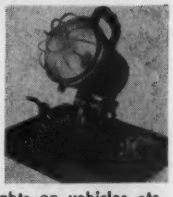

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the round table

discussion of current fire department and fire management problems

Issuing Summonses or Traffic Tickets

THIS IS THE SECOND installment of the Round Table on issuing summonses or traffic tickets.

The generous response from our readers makes it necessary to carry the discussion over to the May issue. The editors will welcome any additional comments on the subject. Address replies to Round Table Editor, FIRE ENGINEERING, 305 East 45th Street, New York 17, N. Y.

Discussion of the Subject

J. H. Freeman, Chief, Tucson, Ariz.: The members of the fire department do not have specific power to make an arrest or issue citations other than the perogative of a citizen's arrest. There are specific ordinances connected with the fire department such as driving over fire hose, following too closely, and interference at a fire or emergency, but the fire department has no authority to enforce them other than the citizen's arrest or complaint. The police department has the authority in such matters.

L. L. Williams, Chief, Richmond, Ind.: We do not have the power to issue summonses. The police department issues them and as chief of the fire department, I file the affidavit for them. The police department assists us in prosecution of the case.

In the past we have had a number of cases such as drunks or unruly tenants that had to be arrested for interfering with firemen in the performance of their duty and violators who fail to give the right-of-way to emergency vehicles.

Dale Holmes, Chief, Cedar Falls, Iowa: Through city ordinance, the members of the fire department do have the power to issue summonses relating to traffic, interference or other fire ground actions in the absence of a police officer.

Firemen noting interference notify the officer in charge who may issue a summons in the absence of the police department.

A police squad car is dispatched to all fires or emergency alarms and therefore cooperates by covering traffic.

If a fireman issues a ticket, he must appear in mayor's court as a witness.

We have been very fortunate in having the cooperation of the police department in handling traffic at scene of fire.

Oscar A. Rishe, Chief, Bristol, R. I.: Special selected firemen sworn as fire police can issue tickets and the police aid in prosecution.

In addition, our State Registrar of Motor Vehicles will deal swiftly and decisively with traffic offenders, if reported by the fire chief. For other interference, the fire chief can make the complaint. The chief is also a deputy state fire marshal with state law protection. Police cooperate and assist.

Our department is volunteer and we do not fight with our friends. We discourage interference by other tried and true methods, known to the profession.

Traffic offenders are the real problem, but we hesitate to ask suspension of a license or registration unless a serious infraction is present. We have no trouble when we mean it.

We have practically no interference from the public.

C. R. Carpenter, Chief, Fort Collins, Colo.: The members of the department have no power to issue summonses to the named infractions of the law. The complaint must be filed with the office to be referred to the City Attorney who issues the summonses. The police department delivers the summons to the party involved; the offender is then tried in police court and the penalty or acquittal is judged there. This same procedure is followed in issuing traffic summons regarding the fire department of proceeding to an alarm and also any other interference with the fire department.

I feel personally, that this is a slow method of getting the job done.

F. Pimental, Chief, Albany, Cal.: The police and fire departments in this city operate on the same radio frequency and therefore respond simultaneously to an alarm. Because of this, the police han-

THIS MONTH'S QUESTIONS

Do members of your fire department have power to issue summonses relating to: (a) traffic or (b) interference, or other actions on the fire ground?

If so, who must issue summons (a) officer (b) chauffeur or driver (c) any fireman?

Is the assistance of the police department or traffic officer invoked in any way in issuance of summons, and prosecution of offender?

What is the procedure followed in issuing (a) traffic summons (b) other (such as interference with firemen in performance of their duty, etc. as distinct from fire prevention violations). Please explain steps taken.

dle all traffic and crowd conditions. One police officer is assigned to the fire ground to assist the fire department in any emergency in which he might be required to act. We have found this procedure to be very effective.

Leonard A. Petrucelli, Chief, Meriden, Conn.: The members of the Meriden Fire Department do not issue summonses relating to traffic or interference on the fire ground.

All violations, etc., relating to traffic and/or interference are called to the attention of a police officer who issues the summons or makes the arrest.

George G. Daeschner, Chief, Dodge City, Kans.: We are very fortunate in having the very fine cooperation of the police department. They handle most of the violations. The chief of the fire department also carries an appointment on the police department. This is not integration in any way, but is used for additional police powers at fires. With the help of the police department and the power vested in firemen by city ordinance, we do not have too much difficulty in controlling traffic conditions and interfering persons.

George C. Hanna, Chief, Danbury, Conn.: Officers of the fire department or members of the fire police do have authority to issue summonses.

The offender is given a violation ticket, which is the same as that issued by the regular police department. The stub is presented at the police desk and the police department takes over and collects the fine.

Henry L. Hilton, Chief, Andover, Mass.: While we do not have the power of issuing summonses, we do sign the complaint before the clerk of local district court. Prosecution is handled by the police with the fire fighter as witness.

Daniel Richards, Chief, Burlington, Vt.: In our city the chief of fire department or a police officer has the power to put the traffic offender, etc., under arrest.

The following reply is in answer to a previous Round Table and gives the views of a British fire officer on hydrant placement.

Lieutenant-Commander P. H. Fordham, Chief Officer, Kent Fire Brigade, Tovil, Maidstone, England: I was most interested to read the discussion in the December 1956 issue of FIRE ENGINEERING concerning the safe and efficient minimum distance which should be permitted between fire hydrants in residential areas, particularly as I have very recently been reviewing the very same matter within my brigade, although for a different reason.

The article concerned and the replies from many chief fire officers, led me to consider whether the mutual problem was one which could rightly be compared. I came to the conclusion, however that a true comparison could not be made because I felt that many varia-

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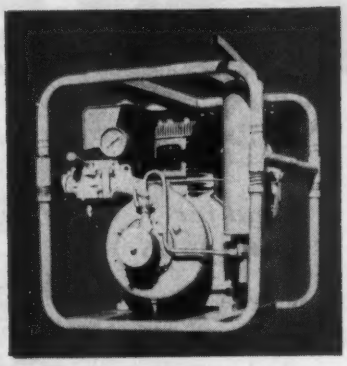
Picture below shows fire-fighter handling stream from a Hale Type FZZ Portable Pumping Unit mounted on a moving truck. An FZZ can be mounted permanently on truck or carried as a portable unit for pumping into or *from* booster tank. This portable arrangement is extremely useful both for fighting brush, field or forest fires while in motion; or for pumping from pond, stream or well direct.

An FZZ will supply from draft 2 capable fire streams thru 1½" lines. Performance substantially exceeds NBFU and NFPA capacity and pressure requirements.

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. Also available mounted on two wheels or on rubber-cushioned steel channels. **Note:** Discharge Adapter can be supplied for use with 2½-inch hose.



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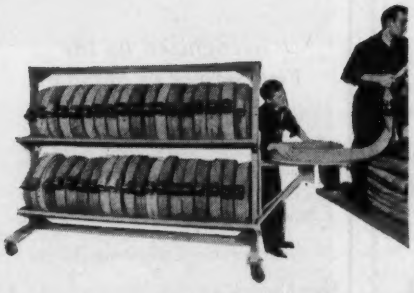

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DELUGE GUN

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tions of conditions making up the basic structure of our brigades must exist. For instance:

1. My brigade is responsible for the prevention and extinguishing of fires for the whole County of Kent which covers approximately 1,520 square miles, 320 of which are urban districts and 1,200 rural areas, whereas I presume the chief officers who participated in the discussion are responsible for one town or city.

2. I was surprised to learn that water undertakings (water department) decide on the siting of fire hydrants in your country, for in the United Kingdom the fire authority specifies the type and position, while the water undertakings have a statutory obligation to install and maintain them at the expense of the fire authority.

3. I presume that most of your towns and cities are built on the "block" principle with streets running parallel and at right angles to each other. If this is so, then a hydrant sited on the corner of a block can normally give cover in four directions and the officer in charge of the incident can control the hydrant by visual signals, instead of using a man who can in all probability be ill-spared as a runner.

4. It would seem to me that in coming to a decision in this matter, one must consider the following points:

a. How many and what type of appliances can be expected to initially arrive.

b. How long it will take them to arrive at the incident.

c. How much hose the appliances will carry.

e. How many firemen will arrive as crew of the first appliances. In my brigade, the answers to the above points are:

a. Two water tenders (booster tanks).

b. In the type of area being considered, approximately five minutes.

c. Each appliance carries at least 1200 feet of 2½-inch rubber-lined hose in 50-foot lengths.

d. Each appliance carries 400 gallons of water and is fitted with two 180-foot hose reels of 1-inch diameter tubing.

e. Each appliance has a crew of three to five men.

The normal procedure in my brigade for small fires is for the first appliance to get to work with one or both hose reels, and for the crew of the second appliance to lay a line of hose from the nearest hydrant. As the great majority of fires in residential areas are brought under control with a hose reel jet, we space hydrants at a distance of approximately 750 feet in these areas, which means that each member of the crew of the second appliance should not have to run more than two 50-foot lengths of hose. In other districts, hydrants are placed at shorter or greater distances according to the type of risk.

I trust these remarks will be of interest. Like your chief officers I believe that to extend the distance between hydrants to 2,000 feet would inevitably mean a lowering of your standards of efficiency.

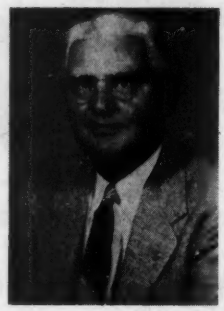
NEWS OF THE MANUFACTURERS

Continued from page 344

The ten-ounce unit is the forerunner of a complete new line of transmitters and receivers for commercial communications. For complete details, address the Department of Information, Radio Corporation of America, RCA Building, 30 Rockefeller Plaza, New York 20, N. Y.

Globe Appoints Grabau

The Medical and Hospital Department of Globe Industries Inc., Dayton, Ohio, recently announced the appointment of Felix G. Grabau as regional sales manager for their north central region, with Milwaukee as his headquarters.

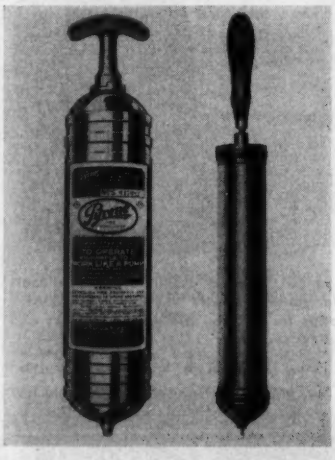


"Fee," as he is known to his many friends, was for 12 years a sales engineer with Mine Safety Appliances, prior to which he served as safety engineer for E. I. du Pont de Nemours.

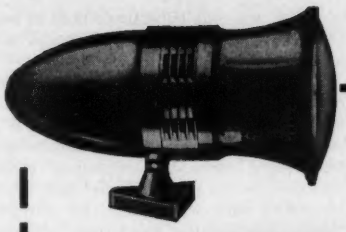
Pyrene Acclaims Half-Century

In the early 1900's Peter G. MacGregor of New York conceived the idea of a portable fire extinguisher and set to work in his shop at home to devise a suitable pump and container.

A friend, E. M. Davidson, suggested that MacGregor use a vaporizing liquid chemical in his new extinguisher instead



A modern Pyrene portable extinguisher and the original 1907 model which sold for $5.00



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Siren sounds a penetrating warning, red light automatically flashes authority. Traffic opens instantly, day or night. FREE ROLLING feature.

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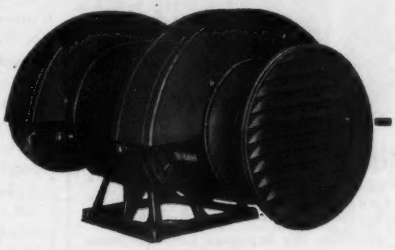

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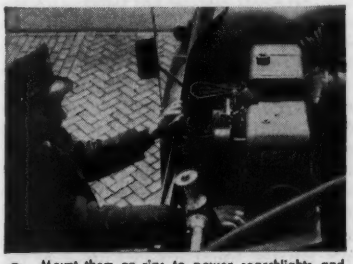
1. Carry them by hand right up to the fire...operate power tools and lights.



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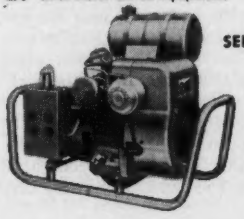

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ONAN Electric Plants help you fight fires all 3 ways!

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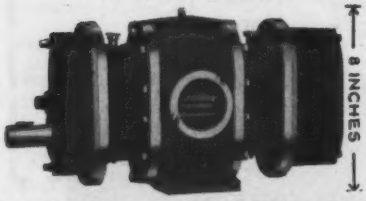

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of water, the only substances then in use. Davidson pointed out this chemical was ideal for fires started by electricity.

The first extinguisher MacGregor turned out was a crude but effective device consisting of a tin cylinder and a simple piston pump. A born improviser, MacGregor pressed a workshop chisel into service as a pump handle; and, when his wife's back was turned, he surreptitiously removed the spout from her sewing machine oil can to use as a nozzle.

As simple as the extinguisher was, it did an effective job.

In 1907 the two inventors decided to leave the tool business and form their own company. The name Pyrene was derived from the Greek word "pyros," meaning fire.

The New York company operated on a small scale until 1909 when the predecessor of today's Pyrene company was incorporated in Delaware.

From these modest beginnings, Pyrene steadily expanded its position in the industry. In 1933 it affiliated with the C-O-Two Fire Equipment Company and recently became the Pyrene C-O-Two Division of the Fyr-Fyter Company, Dayton, Ohio.

Today Pyrene is one of America's largest manufacturers of fire protection equipment, including safety-engineered vaporizing liquid, soda and acid, foam, carbon dioxide and dry chemical portable extinguishers, as well as a complete line of high and low pressure carbon dioxide and foam systems.

COLORADO SPRINGS FIRE

Continued from page 331

intake. It supplied three lines of 2½-inch hose—two to the multiversal, plus the original hand line of Engine 3. Residual pressure was held at exactly zero; not another drop of water was available from this plug and pumper. Discharge pressure was 150 psi.

The department's new pickup truck, mounting a deck gun, was called to protect the Colorado Avenue viaduct from the fire, and parked on the viaduct opposite the south end of the burning building. Engine 6 stretched 700 feet of hose from Sahwatch and Colorado Avenue west to the pickup truck, then made a reverse lay back to the hydrant, where it hooked up and supplied two lines. Four lengths were taken from Engine 5 to complete the lay. This pumper operated in capacity; residual pressure at 65 psi; discharge pressure 200 psi.

All seven engine companies ordinarily in service were at the fire, but the city was not left unprotected. Engine 5, the last company called to the blaze, was parked on Colorado Avenue near the fire, but was in constant communication with the alarm office by radio in the event it was needed elsewhere. In addition, off-shift firemen called back to duty manned two reserve pumpers to protect the city.

There was no damage to exposures. With five master streams plus four hand lines, the fire was surrounded and contained.

McINTIRE GATE VALVES

Fig. 164AN

4½" swivel female x two 2½" male Gated Siamese. Quick opening, ¼ turn valves

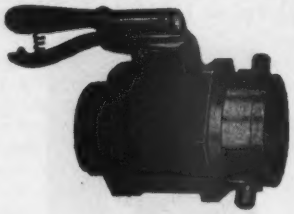

Fig. 163

Made either Right Hand or Left Hand 2½" male x female, gate valve.

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CHECK THE FEATURES . . .
that firemen want and get in JANESVILLE turn out suits.

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- Finest Material
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For cleaner, longer-lasting fire hose

This statement was made recently by a prominent fire chief because *Bi-Kleen* is not only the ideal cleaning and protection agent for all cotton rubber-lined hose, but it also does an amazingly fast and efficient job of cleaning oil, dirt and grease from the floor — even rough cement floors. Fire hose racks and truck beds need a good cleaning compound, too — and *Bi-Kleen* does a perfect job — keeps equipment "inspection clean" *all* the time with less scrubbing!

Order the inexpensive trial size today! You'll discover safe, non-toxic *Bi-Kleen* will save hose, save work, save money. Sold by the makers of the finest fire hose in the world — Bi-Lateral, flat-folding, non-creasing fire hose.

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1 Heavy gauge Steel Carrying Case.

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The fire which started at the north end of the second and third floors swept through the building. The roof and the south wall collapsed.

As soon as practicable, rotation of crews was begun to allow the chilled and soaked firemen an opportunity to change into dry clothing and thaw out. Coffee was supplied on the scene by the ever-faithful Salvation Army, the police department which always cooperates to the utmost with the fire department, and the Eagles Lodge.

Grain smouldered for several days, and Engine 1 and Aerial 1 were recalled to the fire on December 8, and again for the last time at 11:17 a.m. on December 9. Each time they were called back, remaining walls were too shaky to permit safe operation in the ruins, so the aerial ladder was run up over the location where smoke was noted, and water applied.

Initial estimates indicated the loss would be about $175,000. No apparent cause could be ascribed for the fire.

Log of fire department response

10:33 p.m. (December 6)—Phone alarm, fire in Robinson Grain Company. Engines 1 and 3, Aerial 1 to fire.

10:36 p.m.—Radio alarm. Engine 4 to fire.

10:40 p.m.—Radio alarm. Engine 2 to fire.

10:50 p.m.—Radio alarm. Engine 7 to fire.

11:00 p.m.—Radio alarm. Engine 6 to fire.

11:28 p.m.—Radio alarm. Engine 5 to fire.

12:50 a.m.—Engine 4 in Central Station to reload.

1:17 a.m.—Engine 3 to quarters to reload.

1:45—Engine 2 in Central Station to reload.

1:46 a.m.—Aerial 1 in quarters.

In all, 7,050 feet of 2½-inch hose were used in fighting the fire. □□

Disaster Manual for the Detroit Fire Department

Effective December 10, 1956, the Detroit, Mich., Fire Department adopted a natural disaster plan prepared by its Civil Defense Division. The manual is divided into four parts: Part I, introduction to the manual, defines natural disasters, places authority and names the cooperating agencies; Part II includes description of organization and delegation of duties; Part III, describes the over-all disaster procedures, and Part IV defines the fire department standard operating procedures.

The manual is issued by the Board of Fire Commissioners, composed of David Pollack, president; Frederick E. Harris, vice-president and Paxton Mendelssohn. C. J. Hartman is secretary to the Board. Chief of Department Edward J. Blohm and Deputy Chief Edmund J. de Caussin are largely responsible for the preparation of the work.

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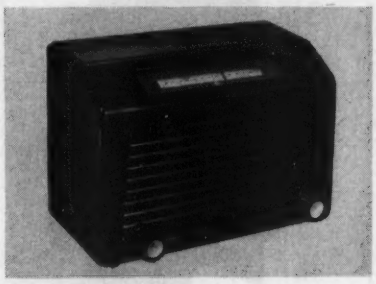

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THE WATCH DESK
overhauling the firemanic news of the day

Quaker City Firemen Quake

A Philadelphia firehouse was raided by a retired Quaker City policeman on February 3, who held the six-man crew of the station at pistol point before he was overpowered.

Henry J. Schneider, 55, the invader, reportedly gave no explanation for his action, which gave the Brothers a few palpitating moments.

The 200-pound Henry walked into the firehouse while all but one fireman were asleep in the second floor dormitory. The watchman, Fireman Samuel D'Urso, confronted the unwelcome visitor, who began muttering about "microwaves" and "radar waves" that were "brainwashing cops and firemen."

The commotion aroused Fire Lieutenant William Coulson, in charge of the house, who went downstairs to investigate. The cop then marched both firemen to where the other four were sleeping. Again flashing his service revolver, which he had used during his 18 years on the police force, Schneider ordered the group to the attic. However, the Lieutenant slipped away and slid the pole to the ground floor, whence he hustled next to the police station for reinforcements.

He returned with two patrolmen and the three sneaked up behind Schneider and overpowered him. The "brainwashed cop" was committed to a hospital for psychiatric examination, and charged with wantonly using a pistol, resisting an officer and violations of the Firearms Act.

The crew went back to bed—but not to sleep.

How to Wake a Boy Friend

Dorothy Genokes, 21, of Columbia, S. C., learned that a fire alarm is a pretty expensive alarm clock.

She testified in city court that she set off the alarm to waken her boy friend the night before.

"I couldn't get him to wake up," she told the Judge, "so I decided to let the fire department do it."

The Judge fined her $25.50. No record of how the fire department logged it—

Firehouse "Slow as Blazes"?

As the wayward press had it, "Rome wasn't built in a day—and neither was the Dunstable, Mass., firehouse. It took the town 314 years to get around to it."

Dunstable's fire station, which was designed by 79-year-old Fire Chief Walter Savill, was dedicated recently. The Chief said the townsfolk used "Yankee ingenuity" in fighting fires ever since the town was settled in 1643. Neighbors sort of depended upon each other to douse house fires and, later on, when real emergencies arose, they called on the fire department of nearby Tyngsboro.

Not only was "Yankee ingenuity" able to build the fire station, a brick structure evolved from sketches made on the back of an envelope, but the Dunstable Fire Department itself, like Topsy, just grew out of nowhere. One of the department's "new" fire vehicles is a revamped oil truck salvaged from a dump heap. Another was handmade by a local insurance adjuster. But, according to the Chief—and the vamps and the townsfolk—they seem to gang up on fire, whenever it rears its flaming head thereabouts. Now that they've a real honest t' goodness fire house it may not be long before they'll be sporting some of the latest manufactured fire fighting vehicles!

Firemen Gotta Have Their Rest

Firemen in the resort town of Asbury Park, N. J., complained that policemen were keeping them awake nights, so now the police department is scattered all over the place. Got no home, so t'speak.

It all started on a January Monday when fire wrecked police headquarters. The cops, who were dispossessed by the fire, moved what of their possessions were left and themselves into the Summerfield Avenue firehouse. But their 24-hour activities—in-and-out, out-and-in—got on the brothers' nerves.

So now we're told, the police blotter is kept in the firehouse, suspects are questioned in City Hall and police court is held in City Council chambers.

The cops, however, 'tis said, have hopes of a new headquarters. City Council leased a garage for them.

By the bye, nobody mentions "integrating police and fire" around Asbury Park!

Hot Off the Tape

An auxiliary fireman of Atlantic City, N. J., has been accused of setting more than 30 fires in Atlantic County during the past several years. Thomas A. Vigue, 46, was booked February 26 on a charge of malicious mischief on suspicion of setting the fires. . . . Phoenix, Ariz., police reported that a 42-year-old Indian woman died after dousing herself with kerosene and turning herself into a burning torch. . . . In Battle Creek, Mich., 13-year-old David Mullett had an "alarming" accident February 9 last. Walking down a Battle Creek sidewalk, David was hit by a falling fire alarm box. He got a black eye and face and neck bruises. Firemen said the box apparently rusted loose from its post, but nobody has explained howcome David was so near the box. . . . In Petersburg, Va., a former volunteer fireman, Martin L. Sprouse, 48, who admitted having a penchant for setting fires, was ordered committed to a mental institution February 21, after a grand jury indicted him for

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arson on eight counts growing out of a series of fires at old houses and an abandoned American Legion hall. . . . The telephone fire alarm systems got poor advertising February 21 in Steubenville, Ohio, when a mob smashed doors and windows and hurled pop bottles at nonunion operators at the Adena Exchange of the Ohio Consolidated Telephone Co. Nobody was hurt. It was the second raid in a week. The union had been on strike since July 15. . . . In Buffalo, N. Y., the 987 men in the fire department include 39 pairs of brothers, a trio of brothers and 24 father and son teams. . . . Mrs. Thea Rys of Omaha, Neb., realized suddenly February 11 that the stork was near and she needed help. There was no phone in the house so she set out for the home of a neighbor. There were 12 railroad tracks between the Rys home and that of her neighbor. Mrs. Rys didn't quite make it. The neighbor guided Mrs. Rys between the tracks; a rescue squad arrived in time to finish delivering a boy. Sort of "special delivery by rail?" . . . Actress Kim Novak was rescued recently by actor Jeff Chandler when her dress caught fire while they were working on a film. . . . Written test for top-rung promotion for chief of New York's Fire Department will be held May 18 and 25 next. The post pays $15,100. . . . This'un from Springfield, Vt., is about an electrically heated doghouse. Seems fire, started by a short circuit in the electrical system, wiped out the "structure." Dog's owner was not at home, but neighbors rescued the pooch. . . . Lupi Garza of Uvalde, Tex., had an argument with his wife so to get even he set himself on fire after buying seven cents worth of gasoline at a filling station. Fire Chief Roy Lee Ham said Garza, a fireman, was in critical condition with burns over 80 per cent of his body. . . . In Granby, Conn., a telephone service man carefully disconnected a wire at the firehouse for a silent test of the alarm system. He forgot the connection on the roof. The system worked right well and several dozen firemen responded for naught.

"Tinkers to Evers to Chance"

Two women, Mrs. Constance Blackwell of Palisades Park, N. J., and Mrs. Kitty Woelffle of Philadelphia, temporarily living in a 215-year-old house at 132 Hoyt Street, Darien, Conn., were awakened early February 24 by an odor of smoke from somewhere within the house.

They went to the phone and asked for the fire department, giving the address. Unknown to the two women, there is a 132 Hoyt Street in nearby Stamford and the phone in the house is connected with the Stamford telephone exchange.

Firemen responding to the Stamford address found no fire. Realizing that the fire might be in Darien, they notified the Noroton Heights Volunteer Fire Department which is nearest to the Darien Hoyt Street location. The vamps responded in time to rescue Mrs. Blackwell from a one-story roof at the rear of the burning building. Mrs. Woelffle had already jumped from the roof, injuring her knee.

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The recharging unit contains six 30-pound extinguishers, 400 pounds of dry chemical, a funnel, powder scoop and a supply of pressure cartridges in a cabinet. In case of fire, one member of the plant's 60-man fire brigade is assigned to transport this unit to the scene with a fork-lift truck. It provides additional extinguishers for immediate use and the materials for recharging exhausted appliances right on the spot.

Volunteers Find New Use for Reflector Dots

An interesting experiment is being carried out in Danbury, Conn., by the Mill Plain Volunteer Fire Company. Noting reports from all parts of the country of deaths of children, invalids and aged people who could not be rescued from fires in time, the Mill Plain fire fighters are distributing a device to help firemen quickly discover at night the rooms where such possible victims would most likely be located.

The plan is simple. The company will give to all home owners within its district, luminous red dots that can be pasted on window panes. In the event of a fire, when the firemen reach the scene, they will turn spotlights on the exterior of the burning building, and the reflections from the red discs will warn them where the first rescue attempts should be made.

The best feature of this experiment, say the Mill Plain firemen, is the fact that it draws wide public attention to a desperate need which is not confined to a district in Danbury, but on the contrary is nationwide. Each time a report is circulated in the press to the effect that several more children have been burned to death in their home, hundreds of thousands of people are made heartsick by the news.

How successful the Danbury experiment will prove cannot be determined at the present time, but if it leads to a real solution of this community problem, parents everywhere will give thanks for the "short cut" launched by this volunteer fire company. *Tom Magner*

'Firewoman Nurse'

One of the most novel "Short Cuts and Gadgets" submitted by our readers reports the Glen Arbor, Mich., Fire Department has a "firewoman nurse." She is Mrs. Jack Rader, really a nurse, who will go out on call with the fire truck to care for fire victims.

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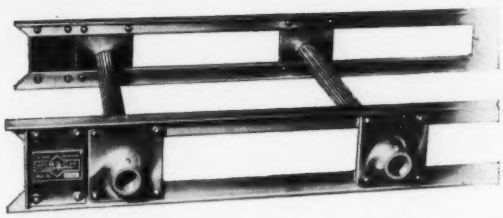
RING

THE PIRSCH QUINTUPLE AERIAL LADDER TRUCK



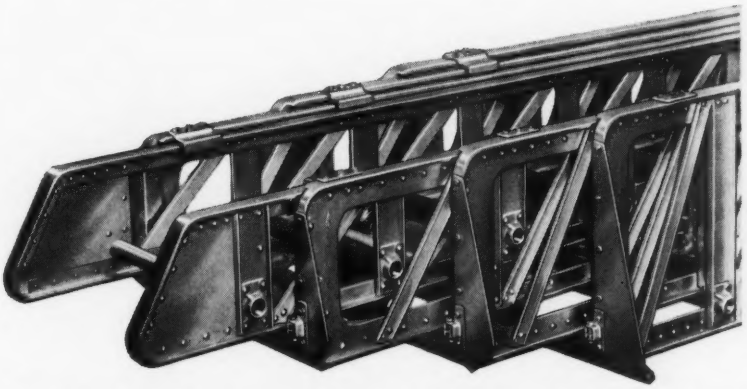
Pirsch built aluminum alloy ground ladders are light and strong. The "T" rails, rungs and channels are aluminum alloy extrusions, and the rail spacers are aluminum alloy forgings from Pirsch dies. Specify Pirsch ladders if you want the best.

INTERNATIONAL ASSOCIATION OF FIRE CHIEFS
Sustaining Member

Outstanding in design and performance this Pirsch ladder truck is offered with various sizes of engines, ladders and pumps. Engines from 226 to 318 horsepower, aerial ladders in 65′, 75′ and 85′ lengths and multi-stage centrifugal pumps in capacities ranging from 500 to 1500 gallons per minute are available.

Either the Pirsch Hydro-Mechanical or the Pirsch Full Hydraulic aerial hoist are optional.

Quintuple aerial ladder truck shown above has been delivered to Evergreen Park, Ill.



This "close-up" of the Pirsch aluminum alloy aerial ladder shows some features which contribute to the rugged structural strength of America's finest aerial ladder. Solid core top and bottom "T" rails, riveted construction and proper bracing are among these features.

Send for our booklet, "Factual Information About Metal Aerial Ladders" for further data.

PETER PIRSCH & SONS CO. KENOSHA, WIS.

"BUILDERS OF AMERICA'S FIRST ALL-POWERED AERIAL LADDER TRUCK
AND AMERICA'S FIRST 100′ AERIAL LADDER"

New FWD cuts run time safely with Four Wheel Drive Control

HERE'S DEMONSTRATED PROOF: No other Fire Engine corners like an FWD with its powered front axle and special power and weight proportioning. No other Fire Engine sprints on straightaways with the same kind of driver control.

Four Wheel Drive pumpers cut run time with a steady, mile-eating pace made possible by their special traction. The driver has four powered wheels pulling to prevent skids. He has natural power steering for cornering. In any weather or terrain he can get there faster with safer control!

The FWD Fire Line includes pumpers, aerials, tankers, crash and rescue trucks—all with the latest and finest equipment and with *safer* Four Wheel Drive. Get the extra "fire insurance" of FWD for your community!

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